1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

As a gift to Bernice P. Bishop Museum, the people of Pukapuka generously made a complete collection of objects of material culture, excepting only the few objects which they can no longer make. A day-to-day study of the processes of manufacture was of great value in clearing up many problems of technology.

Whatever success our work achieved, therefore, is due to the enthusiasm and cooperation of our informants, in the first place, and also of the people of Pukapuka as a whole. Our early work was done entirely with the aid of interpreters. Much of Ernest Beaglehole's later formal work was done with interpreters because he did not wish to risk losing material through inability to follow crucial explanations. Informants could speak much Rarotongan but required the use of Pukapukan when discussing language and various concepts of native Pukapukan life. Our interpreters could speak easily only the Rarotongan dialect. Thus a great deal of explanation between informant and interpreters was necessary before the final English version could be presented to us. For this reason and also because many subjects can not be discussed easily through the medium of a third person, Pearl Beaglehole accepted the necessity of doing without interpreters at the earliest possible moment.

CULTURE CONTACT

Pukapuka was discovered by Commodore Byron in 1765. Between that time and the landing of the first native missionaries of the London Missionary Society in 1857, the island was probably rarely visited by Europeans, presumably because of its isolation and the poverty of natural resources. Native tradition tells of three European ships which visited Pukapuka during these years. Between 1857 and the visit of the Reverend Wyatt Gill in 1862, most of the people of the island had been converted to Christianity. Peruvian slavers twice visited the atoll about 1863 and removed about 100 men and women, only one of whom, the late high chief, Pilato, returned to Pukapuka. In 1869, Captain English of the barque *R. W. Woods* (6, p. 33) landed in Honolulu 42 natives of Danger Island.[1] The natives were unsatisfactory both as plantation laborers and as domestic servants and some time later 20 of them were sent back to Pukapuka by the schooner *Annie*, Captain Babcock. A man from Atiu named Tione, according to the Pukapukan account of this labor gang, returned with the Hawaiian party and later married a Pukapukan woman named Takele whom he had met in Hawaii.

The island was formally annexed to Great Britain in 1892 and included within the boundaries of New Zealand in 1901. The first resident agent visited the island in 1914, and since that year agents have been in residence most of the time. The majority of the people are members of the London Missionary Society church. A Seventh Day Adventist mission was started in 1919, a Roman Catholic mission about 1929. All three missions are

served by native pastors.

1. [Puka puka—analyst]

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served by native pastors. Communication with the outside world during the past years has varied considerably, depending on the rise and fall of the price of copra. For some time a Burns Philp trading schooner has visited the island twice each year to buy copra, to trade, and to carry mail, but this service is now discontinued with the closing of Apia as port of entry for Pukapuka. A warship of the New Zealand station usually makes an annual visit to Pukapuka. There is now occasional direct communication between Pukapuka and Rarotonga, headquarters for the Cook Islands Administration.

The effect of the contact with white culture upon native Pukapukan culture has been out of all proportion to the general lack of communication between the atoll and the outside world, due to the zeal of the native London Missionary Society pastors. Customs and practices associated with the old-time religion have been wiped out; religious structures have been destroyed, and the stones of which they were constructed used to build houses and the causeway that joins old and new Yato villages. Social organization has not been much affected beyond the breaking down of the power of the chiefs and their supersession as governing authorities by an authority set up under the Cook Islands Act. Old kinship avoidances show signs of falling into disuse among the younger generations, though they are strictly followed by the older people. Traditional history and genealogies are still well remembered.

The Pukapukan language is being gradually superseded by the Rarotongan as the language of church and government. The native missionaries have all been Pukapukan or Rarotongan, trained in the Rarotongan mission schools, and the Rarotongan dialect has been the language used by missionaries in the Cook Islands. The Bible used is in the Rarotongan dialect, and today Rarotongan is taught in the school by the present missionary and spoken exclusively by the resident agent. Very old people still speak fairly pure Pukapukan among themselves; some middle-aged people follow this example but use Rarotongan for church and state business; others tend to speak Rarotongan exclusively. Younger people who have passed through school tend to speak Rarotongan for all purposes and often find old Pukapukan speech or idiom difficult to understand. The old chants are remembered in Pukapukan, though they contain many archaic words which even those with a full and ready knowledge of Pukapukan can not understand. We insisted on informant's using the Pukapukan dialect as far as possible in their communications with us, as this was the only way to compile a vocabulary of the dialect; many were the arguments over the admission of various words to our lists of Pukapukan words.

The morality of the community has of course been vitally affected by missionary influence. As a result there is a wide breach between the moral theory on which the community is supposed to operate and the actual code of conduct followed by the majority. The life of the young people in its

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more personal aspects particularly is frowned upon by elders in open but tacitly approved in fact. In contact with white people the Pukapukans always speak and act as if they heartily believed and followed the missionary code. It took us many months to persuade them that we did not care to pass judgment upon what they thought and did but that what really interested us was to find out what these acts and thoughts were. As informants gained confidence in us, they dropped their usual attitude of "being on their best behavior" when we were present and were much more natural and free. This attitude of confidence was sufficient for us to gain insight into some of the more implicit phases of Pukapukan life, but even at the end of our stay we were baffled in our attempts to penetrate far below the surface. The cultural veneer of mid-Victorian morality is sufficiently deep to withstand any penetration save that based on long years of patient probing.

White contact has affected least of all the economic life and the manufacture of native articles. Though many Pukapukans today live in coral lime houses in the permanent villages, native houses still predominate, especially in the copra-making villages. The people wear European clothes; the women wear dresses, the men trousers and, when not working, shirts as well. The use of native clothing had almost disappeared by 1934. Because there has been little money available to buy fresh clothes some women now eke out the life of old rags by wearing coconut-leaf kilts over these during working hours. Boys under 12 or 13 years of age go naked for the most part, reserving pants and shirts for school and church wear. Girls wear dresses from the tenderest age onward. Presumably this tendency would be reversed if the first missionaries had been women.

Every household is supplied with knives, usually a cooking pot, tins as drinking utensils, and mosquito nets. Fishermen commonly use iron fishhooks but they still largely retain the use of native fishlines. Native plank canoes, lashed with sennit, are in common use, the several flat-bottomed European boats being used only for transport of copra and cargo over the reef. Beyond these obvious changes, economic life functions today largely according to old patterns. The few items that could not be made for the Bishop Museum collection consisted mainly of plaited garments apparently infrequently worn in the old days.

LIMITATIONS OF MATERIAL

Data on the more personal and implicit aspects of the culture were obtained from special informants with whom we had built up a confidential friendship, usually without the medium of an interpreter. The material on formal social life, save where it relates to the old-time governing authorities, to the powers of the chiefs and elders, or to the general tapus surrounding the chiefs, is reasonably reliable. Questioning of informants has been sup-

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Animal Life

The fauna of Pukapuka is similar to that of other Polynesian atolls. The pig, chicken, and European rat were introduced after white contact. The native rat was trapped, but not eaten. The native dog was unknown.

Fish

The Pukapukans empirically group the fish in their environment first into major classes of beach fish, lagoon fish, reef fish, reef fish outside the lagoon, and deep-sea fish, and second, into "families". In some cases, the larger fish of one family are given a different name from the smaller fish of the same family. In other cases, however, stages in the growth of the same fish from infancy to maturity are indicated by adding the following adjectives to the name of the fish: *liki, lewu, tino lewu, tawila,* for young fish; *towolo, towolowolo, wolo, punua, tino wolo, tapulanga, tongi* and *palu,* for the large fish. With some fish again, the two systems for indicating development are combined, the name of the fish changing when maturity has been reached. The adjective *palu* associated with fish names, applies to a fish that inhabits very deep water up to 300 fathoms, though it is similar to another fish inhabiting shallower water. Thus, *palu malau* is a deep-water fish that looks like the smaller reef *malau.* The adjective *tawila* refers to small, newly-spawned fish that are driven into the lagoon shallows by bad weather.

The following list contains all the native names of fish that could be remembered by informants as being found in Pukapukan waters. Where possible I have also included scientific names, most of them obtained since I left Pukapuka by Robert Dean Frisbie. Mr. Frisbie asked a number of informants to identify the fish figured by Fowler (9). Other names I have procured from an examination of casts in Bernice B. Bishop Museum.

Akuaku: species of Belone, Strongylura, and Ablennes.
Akula pauoko: Tetrapturus mitsukurii.
Akula toa: Istiophorus orientalis.
Aku pa: similar to aku tangata, but has a squarer body and upper and lower jaws of equal length.
Aku tangata: Strongylura indica.
Ali towolo: Platophrys thompsoni.
Aliki: silver mullet (? Mulloidichthys).
Ali niukatea: similar to pateletele.
Atu: Euthynnus pelamis (bonito).
Atule: Selar crumenophthalmus.
Aua: species of silver mullet, larger than the aliki.
Ava: Chanos chanos.
Ave: a long slim albacore.
Ayetoa: black deep-sea shark, sharp nose, single dorsal fin, single caudal fin, long pectoral fin, long upper fluke to caudal fin, a fast swimmer and a man-eater.
Ayiu: Caranx lugubris.
Ayole: a mulletlike fish, scaleless, white in color with a speckled dorsal fin (Polydactylus ?).
Ayou: deep-sea shark, white belly, black head, very flabby skin, four dorsal fins, two anal fins, earlike protuberance on head.
Eve: species of rock or reef grouper, with smoother skin than the patuki (? Grammistes sexlineatus).
Ie: species of Hemiramphus and Hyporhamphus.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

these hillocks were raised as the result of human excavations with such primitive implements.

Traditions state that the talo beds on Motu Ko were started by the migrants from the legendary land, Yayake, and were continued later by the Pukapukans after the people of Yayake were all killed. Both on Wale and on Motu Ko, excavations continue to this day. The beds that a man digs out are his own property during his life; on his death they are passed on down the paternal descent line. Picks and shovels borrowed from the resident agent help to render excavation today less laborious than it must have been in earlier times.

The village-controlled talo beds (*motu*) are separated into three divisions, one each for the men, women, and children of the village. Each year the number on the village rolls is altered through birth, death, the addition of those attaining sociological adulthood, and affiliation (*tau*) of new members; and a redivision is made of the beds of the members of each class on the village roll. The shares of dead adults are taken by new adults (*wakatane* and *wakawawine*), whose shares in turn are given to new-born children. This redivision (*kotikotinga*) is made by a village meeting at the talo beds. All attend, even children, as a matter of course. The argument, discussion, and division are carried out by the guard and elders of the village; sitting on a near-by hillock, the others watch and assist with free advice and witticisms.

The new boundaries are marked by stones and coconut midrib butts. These soon fall down, but not before the new divisions have been memorized. The actual size of the village allotments varies somewhat from year to year, but in general a piece of land about 3 yards square is the average size of the division for man, woman, or child. Twice a year all the village women gather leaves and plants to fertilize the beds. Each adult cultivates his and his children's land how and when he pleases. The guards inspect the reserve land beds each month and fine each cultivator who has allowed his land to get weedy. The appropriate fine of three pennies or six mature coconuts is kept by the guards for their trouble in levying and collecting it.

The system is flexible and seems to work well. Each household receives an amount of talo land commensurate with its size. The system insures that none shall starve while others hoard up lands they cannot cultivate. Supervision by the guards keeps the land in good condition. The talo beds that a household derives from these village lands are supplemented by lands owned through lineage descent.

Paternal Lineage Property

Lands within village boundaries not controlled by the village unit are controlled by the paternal and maternal descent groups. On Wale, each paternal lineage (*pa*) controls a section of land (*kainga*) of indeterminate

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245 In husking (*yoka*), a nut is brought down on the point of the stick so that the line of penetration is through one of the three longitudinal ridges (*pauŋa*) in a horizontal plane. A longitudinal section of husk is removed by levering the nut outward and downward from the stick, and the process of impaling and levering is continued until all the husk is removed. When it is desired to preserve the edible husk (*mukomuko*) much care is taken and the husk is torn off (*yuŋkili*) gently rather than levered off in large sections.

Drinking nuts are husked completely smooth (*yoka molemole*) or so as to leave a longitudinal strip of husk attached to each nut (*yoka ma te kayuni*). A thin length of fiber is raised from this strip. Pairs of nuts are tied together (*kayuni*) by these fibers, making it possible to throw them over a rough carrying pole (*amonga*) of coconut midrib and thus conveniently carry (*amo*) them from the bush to the home.

245 A heap of *yukali* nuts gathered together from the ground where they have fallen is termed *putuŋa* (pile), whether it is a large or a small heap. Reference to these piles is in terms of the number of nuts gathered, whether 100, 200, or more. Thus a man asks about a pile of nuts, "Na ai te lau nei?" (Whose hundred is this?).

264 The husked drinking nut is opened by piercing or by cracking:

The eye (*mata*), which is in the widest of the spaces between the three longitudinal ridges on the surface of the nut and which is filled with soft tissue through which the nut sprouts, is pierced (*take*) with a coconut leaflet midrib or with the pointed end of the *kalokalo* implement. To open the nut by cracking, it is held in the hand and the shell at the base (*mulimuli*) is cracked against a stone. When done by a skillful hand, the base of the nut cracks evenly all around and is lifted with the fingers without loss of the liquid. Today nuts are more often cracked by three sharp blows with a knife blade on the base. After the liquid is drunk, the nut is broken open (*wowo*) by knocking it against a stone. The soft flesh is scooped out with the thumb and fingers; harder flesh that does not yield readily to the pressure of the thumb is scraped out (*uakamotaka*) with a scraper (*kalokalo*).

TALO

244 The following named varieties of talo are indigenous to Pukapuka: *mawolawola, wakawotu, wakena, kele, pongi* (slow-growing species), *peleua, talaki, kaleleu, newunewu* (slow-growing species), *kula, kiekie, uli, koyikoyi*. All are grown on Pukapuka today save *talo koyikoyi* which was practically all destroyed by the tidal wave of 1914. Introduced varieties are named after the land of importation; as talo Tawiti (Tahiti), talo Polapola (Bora-bora), talo Niue, and so on.

244 The origin of talo and *pulaka* in the world is recounted in the story of Maui (1). Some informants incline to the belief that only one variety of talo was introduced by the gods in the first place and that all other varieties sprang from this one by some power of the gods—a rationalization perhaps of the fact that strains of talo are so mixed today that it is hard to grow one true to type. This causes trouble on talo bed boundaries. One woman plants one variety on her boundary, and her neighbor plants another variety on her side of the boundary, hoping thus to keep the boundary between the

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Tridacna shellfish (*payua*) are eaten raw or mixed with coconut cream and baked in leaves in the oven. Persons especially fond of them collect large quantities which they preserve for future use or for periods of want by stringing them on coconut midrib fibers (*kalava*), 30 to 40 *payua* on each string. The strung *payua* are baked for a day or overnight and then hung from house eaves to dry in the sun for about 10 days. Thereafter they are placed in baskets and stored until wanted.

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Wild birds are not preserved in any way. They are grilled and eaten immediately after they are caught. A bird is plucked at the beach and the feathers allowed to drift anywhere. Head and claws are left attached to the body and the bird is not gutted or cleaned in any way. A length of green coconut midrib, thrust down the throat of the bird and into its stomach, is used to hold the bird over the flames and embers of a fire made of *ngaipu* coconut shells until it is suitably grilled. All the bones are picked clean; the internal organs with the small fish and seaweed in the stomach bag and intestines are considered especially tasty morsels.

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The pig (*puaka*) and the chicken (*moa*) were introduced after white contact. The pig, brought by early missionaries, is eaten today only at feast times or in food divisions to pay workers for services.

A pig is led down to the beach and allowed to wallow in the sea to clean its skin before it is killed by choking. A stout stick is placed across the throat of the animal lying on its back with its legs held or tied. Men stand on each end of the stick until the animal is dead. The dead beast is singed (*musmula*) with flaming coconut leaves and the skin scraped (*vulvuulu*) with a coconut shell. It is washed (*palupalu*) again in the sea so that the skin is clean (*makilakila*). The animal is then placed on a bed of coconut leaves laid on the ground. The stomach is opened up, the internal organs (*ngakau*), heart and liver, are removed and washed in the sea. The blood is caught in coconut cups and baked in them (*toto momoyo*, cooked blood). The intestines are grilled on hot stones; the liver and heart are wrapped in banana leaves and oven-baked. The whole pig is baked in an oven for 4 or 5 hours, according to the size of the animal, and then butchered and shared among the participants in the feast. The head (*ulu*), reserved for the chief, is cut off first; then in order the fore legs (*lima*), hind legs (*cue*), ribs (*ivi kayokayo*), back (*tua ivi*), and finally the hind quarter (*mulimuli*) are butchered. All these portions, together with the heart and liver, are again subdivided into the required number of smaller portions (*pona*). Save for the special portion for the chief, there is no reference in this division to rank or status.

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Hens and roosters were introduced by a captain of a trading schooner whom the Pukapukans called Wuluwulu (Hairy-one) when he visited Pukapuka some time after the mission was well started in Samoa but before it was established in Pukapuka.

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Chicken eggs play no important part in the diet today. It is probable that they were formerly left in the nests to hatch. At the present time eggs are used as gifts to visitors. We saw only one Pukapukan eating an egg, a child eating a hard-boiled egg. A great deal of trouble is taken over the raising of chickens, but at the present time they are rarely eaten. No household has enough chickens to have a chicken dinner very often. Only once, during the Christmas feasting, was a native family seen eating a chicken for a meal. A woman or a child chases the chicken to be killed, then hits the bird on the head until dead. Women or girls pluck the feathers, which are thrown into the sea. The body is singed, the head cut off, and the internal organs removed. The heart and liver are washed and baked on hot stones; the body is wrapped in banana leaves and baked in the oven. A live chicken, talo, and nuts are the usual gift feast sent to honor a friend. Only chickens found strangled in the trees or killed by the women's committee when found in the talo beds are regularly eaten by their owners.

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on one side of the roof, the other midrib on the other side. Where the roof is low, leaflets at the butt end of each midrib are carried under the eaves and tied to a thatch rafter. Where the roof is high, the weight of the midribs is sufficient to hold down the roof securely. A number of these double midrib slings are placed at intervals along the roof for added protection.

House thatching with pandanus leaves was introduced into Pukapuka by missionaries from Rarotonga. The method in use conforms in every particular to the Aitutaki method (26, pp. 11-24):

> Pandanus leaves are collected in the reserves, and straightened (*uwe lawuala* or *yayalo lawuala*) by passing them around an upright stick (*lakau uwe lawuala*). The leaves are then fastened in bundles (*pohai lawuala*) by placing the tip end of each leaf over the butt end and tying the ends of a number of leaves together. The leaves are bent over and sewn to strips of wood split from the aerial roots of the pandanus. A sewing needle (*tui*) is used to split the longitudinal grain of the pandanus leaves so that the coconut leaf midribs (*tuwia*) may be inserted to keep the leaves in position on the wooden strip. The completed roof sheet is termed *pola lawuala*.

Framework Construction

Pandanus wood is used almost exclusively in the framework of the *wakayomoa* type house. Formerly the wall posts were buried about 12 inches in the ground, but in a modern house of this type, four ground posts are supported on low, grooved coral stones and the wall posts are fitted to these ground posts by mortise and tenon joints. In the modern house the tendency is also to fit together tiebeams, wall and roof plates with mortise and tenon joints, but in the old house this would have required much labor with shell adzes. Hence only the tops of the wall posts were grooved (*wakaula pou*) to receive the wall plates, the heads of the rafters chipped out (*wakatala*) to fit against the ridgepole, and roof plates grooved (*wakakamu*) to fit against the tiebeams. If it is necessary to leave a house framework unthatched for several days all the principal posts are wrapped with coconut-leaf mats (*takapau*), and rafters are covered with a few coconut midribs, to protect the timbers from rotting or warping in sun or rain.

Wall Mats

In old houses of the *wakayomoa* type, walls are made with coconut-leaf mats (*takapau*). Mats are made long enough to overlap two wall poles, the depth of plaiting for each mat being about 12 inches. In a typical house, four mats form a set between each pair of wall poles. The mats are supported at their upper, midrib edges by two or three sennit cords spaced equidistantly between the two edges. The method of support is the same as the Samoan method (27, pp. 73-74, fig. 79). The mats operate on a Vene-

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

341 tian blind system and are raised and lowered according to the direction of
253 the prevailing wind. The overlap of the mat screens against the wall poles
254 prevents their being blown inward by the wind.

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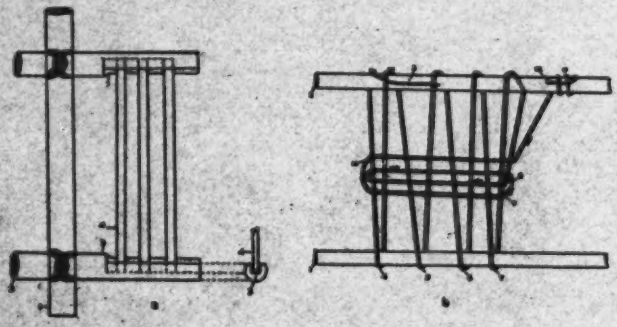

FIGURE 10.—Details of house construction. *a*, making of house wall (*uuiuui*): 1, wall post; 2, horizontal wall logs; 3, point at which slotting of inner surfaces of wall logs commences; 4, thin rails fitting at each end into slotted wall logs. *b*, suspended loop lashing (*ginna uukauua*), bracing first and second ridgepoles (*tau uutua, tau lua*), also bracing third and fourth ridgepoles (*tautalu* and *tau momoli*) in model *wale atua* house: 1, main ridgepole; 2, second ridgepole; 3, buried commencement end of sennit braid laid on ridgepole; four figure-of-eight turns (4, 5, 6, 7) made around both ridgepoles; free end (8) passes in one circumferential turn round four figure-of-eight turns; free end then passes (9) through lower loop of figure-of-eight and back through upper loop (10); lashing finishes with overhand knot made on one cord of outer loop or else free end passes up to second ridgepole where it makes two or more turns (11) and finishes buried underneath two turns (12) and pulled tight.

Wooden Walls

341 Low walls (*uuiuui*) are sometimes added to dwelling and cook houses
335 of the *uukoyamua* type by the following method, said to be old:

Two pandanus logs about 6 inches in diameter are run between the wall posts, one log at ground level, the other about 30 inches from the ground. A rough slot is hollowed out about 3 inches deep and 2 inches wide on the inner surfaces of the two logs. A series of *fuafua* poles, about 3 feet long and 1½ inches in diameter, is inserted vertically between the two logs, the upper and lower end of each pole resting in the slots. This wall, which resembles a close-set railing fence (fig.10,*a*), incloses the house on three sides, leaving one end open for a door. On the outside of this low wall and between the top of the wall and the roof eaves (if the eaves are high), *takapau* mats are hung for extra protection. Cook houses rarely add the extra mat protection unless they are in exposed situations. The method of adding a wall to a house by inserting horizontal slats between uprights and tying the slats together by a continuous cord of sennit is modern and introduced from Rarotonga.

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1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

343 284 ways built into the center of the platform. Formerly the bottom hatch (*pu lus*) was level with the platform and lashed to it by complicated knots supposed to be known only to the owner of the house. When in use, the fastenings were untied and the hatch placed on the ground. The top hatch (*pu tai*), about 12 inches directly over the first hatch, was lashed horisontally to the top ends of thin vertical poles, which were lashed at the bottom to the platform supports. The two hatches and the vertical supporting poles thus formed a sort of box resting on the platform. On visiting his *wale takataka*, the owner took with him a block of wood which he placed on the ground under the hatch. He mounted this block to unfasten the first hatch, inside of which he usually kept a length of rope. One end of this he fastened to the platform and then, by the help of the 343 hanging rope, scrambled up to open the second hatch. On leaving, he securely fastened the hatches, retied the knots, placed his piece of rope on the platform, and carried off 412 his block of wood. After white contact a short ladder, something like a truncated 414 grocer's ladder, came into general use to reach the platform hatches. This was called 177 *tula*, a name probably derived from the word "stool". It was kept in the owner's sleep house when not otherwise needed. I saw no *wale takataka* house with two hatches in the storage platform. The above description is based on informant's account of old time practice. Many houses today, however, have the single hatch, which as often as not is fastened with hinges and padlock to the platform.

RIDGEPOLE, WALL PLATE HOUSE

341 344 335 The type *wale atua* house is a bilateral wall plate house with two or more ridgeposts supporting the ridgepole (fig. 11). The type house was used in former days principally as a god house (*wale atua*), but the massive construction style made the same type of house ideal for a meeting or watch house. Smaller houses of this type were occasionally used as sleep houses. There are available for study today the watch house at Matala, erected 75 years ago (described as type), a sleep house on the outer beach of Uta, and a model *wale atua* house (C8086)[7]. Brief mention of certain features of the framework of the watch house has already been made by Macgregor (20,p.43).

The watch house was originally constructed with six wall posts. A seventh post has been added at a later date to give added strength. The wall posts of *puapua* wood are sunk about an arm's length in the ground. Each post is round in cross section, save at the top where it is adzed roughly rectangular. The top of each post is grooved to receive the wall plates of pandanus wood, which are laid in the grooves, unlashed (fig.11). Five tiebeams are placed transversely across the wall plates, one tiebeam at each end, and the other three equi-spaced along the length of the house. The end of each tiebeam is grooved to fit securely over the wall plate to which it is lashed. The ends of the tiebeams are flush with the wall plates. Two ridgeposts of *puapua* wood, buried in the ground at one end and grooved at the other end, support the main ridgepole of pandanus wood which rests in the grooves and is unlashed. Each ridgepost rises from the ground on the inner side of the second tiebeam from each end; about 2 inches separate ridgepost and tiebeam. Running between wall plate and ridgepole on either side of the house are six principal rafters of pandanus wood. Each rafter is round in cross section but is grooved at each end to fit against ridgepole and wall plate, to which it is lashed. Each rafter at its lower end projects about 9 inches beyond the wall plate. The under surface at the end of the rafter is flattened that the square surface of the eaves purlin may fit more closely to it before lashing (fig.11,*c*).

[7] Unless otherwise stated, all collection numbers refer to specimens in Bernice P. Bishop Museum.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

and kept on rough platforms made by laying longitudinal members across the tiebeams of the house. Plaited pandanus satchels (*tuluma*, p. 134) for valued fishhooks and larger satchels of the same type for malos and other items of dress were also kept on the tiebeam platforms.

Plaited pandanus pillows (*ulunga laukawa*, p. 134) and wooden headrests (*ulunga lakau*; fig.12,*d*) were in occasional use. Most people, however, did not go to the trouble of making a special pillow but used for this purpose any suitable block of wood. Soft driftwood was favorite material, a piece of cork of suitable size and thickness being most prized. Today, the usual headrest is a block of wood inserted into a European pillowcase and packed tight with a thin layer of kapok. This pillow combines a desired hardness with the prestige value of using a European object.

Wooden back rests (*teke*; fig 12, *c*) were occasionally made in former times. Made of *wakanava* wood, they were used for resting in a reclining position inside or outside the house.

Insect switches (*uene*) are in great demand when mosquitoes (*namu*) become vicious:

These switches are quickly made by superimposing three sections from the tip end of coconut leaf midribs, each section carrying 10 to 20 leaflets. These are bound together by several transverse turns of fiber from the coconut leaf midrib or by passing two leaflets from the bottom midrib around the several midribs in opposite directions and tying the ends together with overhand knots. The switch is discarded when the leaflets become dry.

Brooms (*velevele*) made from leaflet midribs are in common use to sweep up rubbish from the floor of dwelling or cook houses.

A short broom (*velevele tuaniu*, C8193) is made of midribs (*iua*) stripped from coconut leaflets and dried in the sun. These are caught about 1 inch from the proximal end in a three-ply braid of pandanus material (*lito*) about ½ inch wide. The projecting midrib ends are bent over and braided with one of the *lito* plies as a single ply. The braiding is continued for about 25 inches; for this length, about 170 midribs are required. When all the midribs have been added, the braiding is continued for about 6 inches and fastened with an overhand knot (*vakapona*). Starting with the commencement end, the braiding is rolled (*tupetupe*) on itself to form a convenient bundle of midribs. The free end of the braid is wound around the butt ends (*mulimuli*) of the midribs and fastened with an overhand knot. The distal ends of the midribs are trimmed off to make bristles about 2 feet long.

A large broom (*velevele wolo*) for sweeping the ground outside the houses is made from hard coconut midribs that have dried on the leaflets. The midribs are gathered together in the hand and spaced evenly around the end of a long handle, generally a length of *ngaugie* wood about 4 feet long. The butt ends of the midribs are fastened to the handle with transverse turns of sennit, commencement and finishing ends being buried underneath the turns.

Lighting inside the dwelling house is usually provided by burning a few dry coconut shells on the floor. Today kerosene lanterns are fairly common,

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

in scraping shell (*valuyi, Nerita polita*) a little to left of apical whorl; four lashing turns of fine three-ply sennit braid (3) pass from handle through shell (2) where commencement end is buried, lashing continues with 16 transverse turns around distal end of handle (4); finishing of lashing buried beneath last turns; at proximal end a thin cord (7) of twisted *wao* fiber is attached so that the scraper may be hung up; two notches (5, 6) cut in handle; the two plies of *wao* cord lapped about notch (5) and fastened with figure-of-eight turns of fine, two-ply twisted sennit which pass around handle and between two notches; free end of sennit seized (8) around *wao* cord and finishing end buried. *b*, coconut stand grater (*tuai*) (C8106): clam-shell grater (1) mounted on wooden stand (2) cut from solid block of *wetau* wood; horizontal base 1 foot 10¾ inches long, 4½ inches wide at proximal end, and 2 inches thick; two triangular notches cut into proximal end said to be old form of ornament; oblique arm (3) 7 inches long, 3 inches wide, and 2 inches thick; angle (4) at which arm leaves horizontal base obtuse, under side (5) shaped and rounded off slightly; distal end of oblique arm (6) slotted for depth of 2 inches and concave so that convex outer surface of shell grater fits securely against arm; a piece of cork (7) fitted against inner concave surface of shell grater; lashing of three-ply braided sennit (8) applied over cork and around arm; lashing consists of 24 turns with buried commencement, and under normal conditions finishing end would also be buried, but in this grater free end is not cut off flush with transverse turns but is knotted and left free (9) so that grater may be hung up by free end. *c*, back rest (*teke*) cut from solid block of *wakanovo* wood (C8161): 1, four-sided stand 8¾ inches high at back and 5¾ inches high at front, sides about 2½ inches wide; 2, main backrest, surface of which has slight transverse and longitudinal concavity, 2 feet 3½ inches long, 9½ inches wide, and ¾ inch thick at edges; continued by horizontal extension rest (3) 4 inches long, ¾ inch thick at sides; 4, end resting on ground has bevel 1½ inches wide; 5, under surfaces of horizontal extension (3) shaped obliquely, coming together in short mesial longitudinal ridge 1¾ inches high. *d*, wooden headrest (*ulunga lakau*) (C8184); roughly cut from single block of *puapua* wood: 1, pillow section 1 foot 7 inches long, 5 inches wide, and 2¾ inches thick; 2, four legs, each 2½ inches high, 3¼ inches wide, and 2 inches thick; 3, slight flare at base of right front leg due to unskilled workmanship and not to design.

Furnishings of Pukapukan houses today include little that is modern. Occasionally one sees a European chair. Most houses have wooden chests or suitcases in which clothes are kept. European mosquito nets are in common use, and several houses proudly display antique sewing machines. Beyond these few articles and bundles of mats, the house interiors are generally quite bare.

FOOD UTENSILS

To harvest and husk coconuts, the climbing bandage (p. 146), husking stick, and carrying pole are used. The husking stick (*koyo*, C8049) of *ngangie* wood is driven into the ground for two thirds of its length. Informants were sure that the short stick was the only type used formerly, the worker kneeling or squatting on the ground to husk. Today, a much longer stick is generally used, the husker standing and bending over the stick. The carrying pole (*amo*) is a convenient length of coconut leaf midrib on which a nick is made at each end. Pairs of nuts are slung over the pole, the

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

314 372 shell), the longitudinal ridge (*tua ivi*) on its back (*koa yiyi te tua o te lito*). The back of the leaf is termed *tua*, the front, *aloalo* or *vakevake*. When the fire has burned down to red embers, the worker passes the leaves in bundles of about 10 back and forward over the embers for about 1½ minutes or until the leaves are thoroughly warm (*koa lalo te lito ki lunga o te ava*). Some women heat the leaves over the embers before stripping off the back ridge. She next cuts off the narrow ends of the leaves so that the width of each leaf is fairly uniform throughout.

314 The next process is bleaching (*wakamumuka te lito*). The leaves are spread on the ground in the sun, gathered in at sundown each day, and spread again the next day, for several days.

Next the leaf is made smooth (*yuyalo te lito ki te ngaipu*). The worker takes the butt of the leaf in her left hand, the rest of the leaf in the right hand in which she holds a dry half coconut shell. She presses the outer surface of the shell against the leaf surface and draws the leaf through her right hand. This smooths the leaf, which has become curled and twisted in bleaching.

She strips off the spikes of the leaf (*yiyi te mata tala*) by biting a commencement with her teeth at the butt of the leaf, then inserting the thumb nail in the slit, and running it longitudinally down each side of the leaf. She smooths the leaf (*yapini te lito*) a second time by winding it round the fingers of the left hand, back (*tua*) side inward, at the same time stretching the leaf until it is as smooth and wide as possible.

314 285 The final process is making the leaves into bundles (*pokoi*) by winding one leaf on top of another until a flat, round bundle about 12 inches in diameter results. The completed bundle is fastened with a strip of pandanus and the material is now ready for plaiting.

Like *lito*, *lauvilu* leaves are first heated over the fire and bleached in the sun. The process then is as follows:

The spikes are trimmed off (*yiyi loa na mata tala*). Next, each leaf is split transversely and longitudinally. The two leaf strips are soaked in the sea. Each leaf in a bundle of leaves is tied with a single overhand knot to a coconut midrib which is pushed into the sea bottom of shallow water so that the leaves are covered at low tide. After soaking for two to three weeks, both front and back strips of the leaf provide a stiff material (*laukie*) used for mats; the *tua* strips of the leaf, soaked for four weeks or longer, give a soft, flexible material (*kie uvie*) used for plaiting malos. When removed from the sea, the leaves are washed in fresh water (*wakamangalo i te vai*). They are then dried in the shade (*kavv loa tatou ke pakapaka i loto o te vale*), and smoothed (*yapini*) by winding around the hand. The leaves are bleached a second time in the sun (*kavv loa wakalo ke mumuka*) and rolled into large bundles (*pokoi*).

A third preparation of pandanus leaves, termed *lauvala pakapaka*, is easily prepared to provide a strong material for some designs. Dry pandanus leaves are collected from the ground beneath the trees, the spines are removed, and the leaves smoothed and rolled into bundles.

MATS

285 177 The technical processes in the plaiting of Pukapukan mats correspond exactly to the Samoan technique for plaiting *papa* and *fala* mats (27, pp. 214-221). Plaiting elements are either single (*langa tai*) as in plaiting thick materials or material where a soft finish is desired, or double (*langa lua*) treated singly as in plaiting thin material (*lito*) which is to be sturdy and long-wear-

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

283 T11 ing. In plaiting with a single element, the finished surface has the back of the leaf uppermost. In plaiting with double elements, the two single elements are placed together with the back surfaces (*tua*) outward; when the mat is finished, the back of the leaf shows on both sides.

The free single or double element commencement is known as *kauinga pukapuka* to distinguish it from the double butt commencement for single element plaiting (27, p. 217), which is termed *kauinga pa wenua* (foreign commencement). Informants believed that the double butt commencement commonly used today in hat making and satchel plaiting was introduced from Samoa or from the lower Cook Islands after white contact.

The finishing technique follows the Samoan method (27, pp. 218-220, figs. 116-118). It is impossible to fold in the last dextrals when the right hand top corner is reached, so the worker takes a thin strip of coconut midrib about 6 inches long, points it at one end and makes a longitudinal transverse slit in the other end. The free end of the dextral is inserted in the slit and the midrib is passed back underneath the check strokes, drawing the dextral after it. Both the process and the needle are called *yulu*. The dextral is then cut off flush with the dextrals that have been folded back along the finished edge.

283′ Technical terms employed in Pukapukan plaiting are:

Langa, wai: to plait.
Tawenu: pandanus element.
Tawenu patapata: a wide element.
Tawenu liliki: a narrow element.
Langa tai: to plait with single elements.
Langa lua: to plait with double elements.
Tawenu ki lunga, tawenu ki lalo: the element above, the element below, in double element plaiting.
Tawenu: to add elements when working elements have run short and must be lengthened to continue the plaiting.
Kauinga: the commencement corner of the plaiting.
Wakamulinga: the bottom right corner.
Ikiikinga: the top right corner where the finishing process (*ikiiki*) commences.
Wakamulinga no te ikiikinga: the top right, or finishing corner.
Taotawa: the right or left edge of the plaiting.
Ala: the working shed.
Tonga: the term used to describe the number of elements making up the working shed. The shed is made of 5 to 20 elements according to the thickness of the elements and the skill of the worker. One asks: "Ewea to tonga?" ("How many in your shed?") The reply is: "E laulau toku tonga" ("My shed is composed of 20 elements").
Lolotonu: the completed part of the plaiting to the left and below the working edge.
Kopi: to fold an element in making the edge.
Nape, napenape: a plaiting stroke or series of strokes. To plait in check was given as tawenu nape takitai, or tapani tai; to plait in twilled twos, tawenu nape takilua or tapani lua.
Loa, lapalapa: length, breadth of plaiting surface.

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

285 313 either end. A hollow cylinder was made and stuffed with banana leaves (*lau waiti*) or coconut husk fiber (*lau hawa*). The technique by which this pillow was made has been forgotten, for no woman professed herself able to make the article. Yielding to my suggestion that someone experiment, two pillows were made, but neither conforms to informants' description.

Pillow C8182 has a four-cornered cover 13¼ inches long, 6 inches wide and 2½ inches thick. It is plaited in single element check of *lito* material. Wefts 3 to the inch. The technique is that of ordinary mat plaiting, plaited in the modern way around a wooden block. The oblong cover is stuffed with coconut fiber and closed by passing finishing wefts under adjacent plaited elements.

Pillow C8183 is also four-cornered, 11 inches long, 5 inches deep, and 2½ inches thick. It is plaited in single element check of mixed *lauvala pukapuka* and *lito*. Wefts 2 to the inch. The cover is stuffed with banana leaves.

285 291 177 Hats of European style are made of pandanus materials or prepared coconut fiber. They are of the Panama type, either plain or decorated by change of plaiting stroke or by overlaid strips of red-dyed materials. They are worn as protection against sun and as part of the church-going costume. No head covering or eyeshade of pandanus or coconut leaf was made in former times.

Coconut-leaf Articles

Mats and Sheets

285 [171] The technique of making the Pukapukan coconut roof sheets, roof ridging sheets, and wall screens follows exactly the Samoan technique (27, pp. 169, 174, 176; cf. 26, pp. 7, 24).

Pukapukan coconut leaf mats in Bernice P. Bishop Museum are described in the list given on page 136.

Baskets

Plaited coconut baskets (generic name, *ola*) are made with two different commencements—the twisted, two-strip commencement (29, p. 107, fig. 25) and the Pukapukan turned-back, two-strip commencement.

In the twisted two-strip commencement, the leaflets of each strip, following their natural direction, are twisted over the leaflets immediately in front. Two strips carrying leaflets are placed together, the sinistral-bearing strip above the other strip. To make the plaiting close and neat, one or more extra leaflets are added as extra wefts by placing the butt end between two midrib strips forming the commencement. This is the two-strip commencement with extra wefts which corresponds to the Tongarevan technique (28, pp. 127,133, figs. 14,17). The plaiting of the body of the baskets is in twill. At the bottom are a few rows of check, the size of the basket being made smaller by superimposing two alternate dextrals or two alternate sinistrals and plaiting the two elements as a single element. The baskets are finished with a braid.

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of one ply in passing over to the middle position. The under surface of the five-ply braid is termed *aloalo* and is marked by a pronounced transverse concavity. Shreds of coconut fiber left by the braiding are not cut off but are left, presumably to ease the rub of the malo against the skin. The outer surface (*tua*) of the malo is flat and smooth because the shreds are cut off. Braiding is very tight and strong. Informants mentioned that the utmost a good worker could braid each day was about 12 inches, and from this his hands became roughened and torn by tugging at the braiding to make it tight.

A sennit malo observed in the field was of five-ply braid, 33 feet long, ½ inch wide, and ¾ inch thick. The commencement end (*kamatanga*) consisted of a two-ply twisted loop, 1¼ inches long. This loop was hitched over a bracing stick in braiding and the four ends braided as a four-ply braid for 1 inch. A fifth ply was then added and the rest of the malo braided five-ply. The finishing end (*wakaotinga*) was fastened with an overhand knot, and a length of two-ply twisted sennit, 4 feet long, 1/16 inch in diameter, was knotted to this end. This length of twisted sennit (*kawa li malo*) is used to secure the malo to the waist when worn or to fasten it in a flat disc when stored.

Malo C8146 is made of two shorter lengths of five-ply sennit joined together by knotting. One section of the sennit is ½ inch wide, 3/16 inch thick; the other section ¾ inch wide, ½ inch thick. A malo is wound for storage in the shape of a disc (*iho*, pl.3,*C*). The malo is laid on the ground, the commencement end folded in and the rest of the sennit wound round this core to produce a flat disc 11 inches in diameter. The turns are held together by the *kawa li malo* cord which passes from the circumference through the center hole of the disc and back to the circumference again where it is looped round the first turn. The free end is passed round the circumference for 3 inches, then passed down to the center hole, and back to the circumference again, these turns being repeated at every third inch round the circumference.

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The ordinary, quickly made, climbing bandage (*koanga*) is made from strips of coconut midrib (*kalava*), chewed to soften the fibers, and then looped by fastening the ends with a reef knot. The coconut climbing bandage (C8057), *koanga kake niu* (climbing bandage to climb coconut tree), is 30 inches long, 5/16 inch thick. More permanent and stronger bandages, braided from pandanus roots, are used by a bird catcher who wishes to be sure that a bandage will not break and throw him to the ground during the several hours he remains in a coconut tree. Young aerial roots of the *yulu* species of pandanus are cut as long as possible and baked in the oven or heated over a fire. The roots are pounded with a piece of wood until the fibers are soft and flexible. Strands of this material are made into a three-ply braid, the ends knotted to form a loop. Climbing bandage C8159, (*koanga yulu*) is three-ply braid, 45 inches long, 5/8 inch wide and 3/8 inch thick.

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Men today spend much of their time at braiding sennit and *uwo* fiber for ropes and fishlines. When the price of copra was high, many European fishlines and ropes were in use, but low copra prices have sent the men back to native materials though they consider cordage making a laborious job.

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CLOTHING

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177 The Pukapukans today wear European dress termed *kakau* (coverings). Formerly the everyday dress of the man was the *malo launiu* of plaited coconut leaf; that of the woman, the coconut leaf kilt (*titi launiu*). These articles of clothing were called generically *wakakawu*; any clothing or ornament attached to the waist was called *lulu taukupu*. In general clothing was worn below the hips. Today men retain this pattern in the way they fasten trousers below the hips.

The technique of making the man's coconut-leaf malo has been given (p. 141). To wear the malo, the strings are tied round the waist, the body of plaited material is placed over the genitals, and the braided tail is passed between the legs and fastened to the strings at the back. The woman's kilt of coconut leaf reaches to the knees.

294 The kilt is made by splitting leaflet-carrying strips of appropriate length from the butt end of the coconut leaf. The strips are made thin and soft by tearing off superfluous fibers with the teeth and by chewing. Four of these strips are placed together in pairs, with the rough side of the strips in juxtaposition. The two pairs of strips are tied together at 3-inch intervals with strips of midrib fiber (*kalavu*). Each leaflet is split longitudinally by removing the leaflet midrib (*tua*), and may be split again any number of times with the thumb nail. A length of two-ply twisted sennit is tied to each end of the midrib strip waistband by which the kilt is fastened round the waist. There is no record that the leaflets of the kilt were ever plaited or braided together. Kilt C8192 conforms in all particulars to the above description.

293
283 Back supports of twisted fiber are sometimes worn. Formerly these girdles were made of the bark of the *welo* tree.

The bark was removed from the trunk of the tree and soaked in salt water for about two weeks. Strips of bark were then cut to the appropriate length and width and soaked in fresh water until the bark was white and tough. Dyed red, the bark was used as streamers for ornamental headdresses. Left white and twisted into a cord termed *matoi welo*, it was used to make the champion's ring at a wrestling contest or
[764] was wound round the waist (*pepelu ki te matoi welo*) to support the back against strains. Today mourners sitting round a corpse for 24 hours or longer tie a sennit cord round the waist to support the back against the strain of continuous sitting.

291 Sandals of elaborate type are unknown. But when, after prolonged reef fishing, the soles of the fisherman become very soft from long immersion in water, he may strip coconut leaf stipule (*kaka niu*) from a tree by the beach, fold these strips to a suitable thickness, and tie them on his feet with lengths of coconut midrib fiber (*kalava*). These foot coverings, termed descriptively *wakamalu vae* (foot soothers), were worn over the sharp and hot coral until the soles hardened again.

Uncovered heads are exposed to the sun only for short periods. Adults who are to be out in the sun for some time invariably wear hats or make a rough head covering out of coconut leaves. No eye shade was or is worn to protect the eyes from the glare of the sun.

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

were shorter than those made of sennit and were therefore worn more as ornaments than as protective clothing.

Both the malo of sennit and the malo of pandanus are greatly valued today in terms of sentiment and scarcity. No longer being made, they are the greatest heirloom that a man can hand on to his son. Sennit malo C8146 was procured from a childless man who felt he had no further use for it. During the confessional held as a last desperate attempt to save the life of an only male child, the sennit malo that the child would inherit was hung from the house tiebeams as if its highly charged sentimental value might help the child to hold onto life (p. 338).

Informants suggested that the hands of contemporary Pukapukans are different from those of ancient Pukapukans and that therefore the art of making the very tight five-ply braid of the sennit malo has been lost. But, as both malos might be classed by missionaries as heathen garments, there is no longer sufficient incentive in the culture to take the trouble to make them.

The art of making the poncho-like garment (*la kupenga*) worn by men above the pandanus malo has been lost, but from informant's description it seems that it is plaited of fine strips of *kie* pandanus material. Three or four elements were plaited as a single element (*langa tolu* or *langa wa*). The garment was rectangular, falling to the waist at front and back. The neck hole was either square or roughly V-shaped. Hanging ends were fringed with strips of *kie*, and the garment was fastened with strings of *welo* cord (*matai welo*) on either side, one pair of strings under the arms, another pair at the waist. Informants felt that there was no status associated with the wearing of this garment, but it was worn on festive or ceremonial occasions by anyone whose wife or relative had acquired the technique of plaiting it from a dream in which familiars came from the Underworld to teach it. The following lines of an old chant were quoted to prove the antiquity of the garment:

Wakakawua ki te la kupenga	Clothed in the *la kupenga*
Tuputupu a Yiva angaoti	Made as in Yiva (legendary land)
Yongia ona wakaeveevenga.	certainly, Smelled its fringe.

Informants said that a Pukapukan man returned from the land of Yiva where the art of making *la kupenga* was also known. He was wearing a foreign-made *la kupenga* when he landed. The people went to greet him and some pressed the fringe of the garment to their noses. This fringe had the smell of a foreign land or of a foreign people. It may be inferred perhaps that the garment was introduced into Pukapuka from the land of Yiva and never became a common article of wear, its use dying out rapidly when the Pukapukans acquired European garments.

Corresponding to the *la kupenga* worn by men was a sort of short cape (*yeu*) worn by women. The art of making the *yeu* has been lost today.

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Stone Seats

Formerly a man might make on the outer beach a stone seat (*tokerwe-langi*) on which to rest in the cool of the evening, eat the evening meal, and sleep. Informants stated that the two Pukapukan voyagers, Tonu and Taea, saw stone seats on the island of Wakalava and introduced the idea on their return to Pukapuka.

There was apparently much latitude in the way these stone seats were built. Some were built with a stone seat, stone back rest, and a slab at either side for an arm rest; others were made by hollowing out a shallow depression in the sand and facing the bottom and sides of the depression with coral slabs. The sides were inclined at an angle of about 10 to 15 degrees to the bottom; the bottom was at least 6 feet long, and 3 feet wide, wider if a man planned to take wife or sweetheart to sit with him. Other seats were made according to fancy. Each seat was named after its owner and served as a symbol of his prestige. No seats are used today, most of the stones having been used for oven stones: missionary teaching does not countenance the use of stone seats on lonely outer beaches. Macgregor's statement (20, p. 25) that the idea of these seats was brought to Pukapuka by the people of Yayake and that they were used by priests as religious structures for the offering of turtle and fish to the gods received no support from informants who were strongly of the opinion that the seats were places of rest and recreation only.

The stone seat on the southeastern outer beach of Motu Ko, which tradition states was used by the bird man Watu-manava-nui, is now in ruins. The remains of other seats lie close by. The outer beach has been elevated at this place by the piling up of coral gravel through wave action and the ruins of the seats are situated well under the lee of the raised beach. To have been useful as cool resting sites, the seats must have been built before this beach was elevated. The ruins consist of fragments of stone 1 to 2 feet square. The original stone seat, suggested informants, has been gone for many generations, washed away by high seas. A later generation built on the same site, but these seats were mostly destroyed by the seas; those that remained were pulled down under missionary influence.

Walls

Stone walls marking the boundaries of the reserves (p. 35) have now almost disappeared, but remnants of the wall round Uta are to be seen at the place Matala. The wall consists of large slabs of coral conglomerate set on edge. The old gate (*pu*) through this wall still remains. It consists of a gap about 2 feet wide marked on either side by a stone reputed to have been carried there by the warrior Kupolu. One stone is 7 feet wide, 8 inches thick, and 4 feet 8 inches above ground; the other is 7 feet 8 inches wide, 22 inches thick and 4 feet 4 inches above ground. Each stone is set about 3 feet in the ground. The size of the stones, if typical of all the stones forming the wall, indicates the great labor of building the wall.

House Foundations

The use of small coral slabs set on edge to form the boundary of the house platform and the use of coral pebbles to form the house floor is described on page 116.

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No other sites visited revealed stones. Informants stated that during early missionary days, the stones were removed to build a causeway across the talo swamp, to make walls for stone houses, and to burn for lime, which, mixed with sand, provided the mortar for the new stone houses.

The pattern of low-walled, oval or circular religious enclosures with a central stone representation of a god is an unusual development in Polynesia and recalls the structures that Gill described for Niutao in the Ellice Islands which he visited in 1872. Gill mentions that the stone representative of the god Tangaloa was a plain upright slab. The religious structure adjoined the burial ground (a common Pukapukan pattern) and consisted of "an oval low enclosure, composed of flat stones, some higher than others, each representing a distinct divinity, so that the sacred men standing inside the enclosure—the people of course outside—could worship all the gods at once" (12,p.14). It is unfortunate for comparative study that Gill did not particularize these religious enclosures in more detail.

Commemorative stones, marking the shrine of an ancestor god on a sacred clearing (*yiongo*), consisted of a single upright stone set in the ground, or else several stones set on edge to form a rectangular structure two or more feet square, the enclosure being filled in with coral gravel. This type of commemorative shrine was similar to the seats (*potu*) of the priests in the god house (*wale atua*) and also to the low seat that was set before the stone representative of the god on the religious structure.

Graves

Formerly each cemetery was surrounded by a low, rectangular wall (*pas-pas*) of coral stones which demarcated the area set aside by the people of a lineage as their burial place. The area varied in size according to the numerical size of the lineage. Most of these walls have fallen into decay, but are observable on some cemeteries removed from the village. The stones are about 3 inches above ground and are undressed coral of different lengths and thicknesses.

Outside these walls are observable the stone *paepae* that marked the foundations of old houses of mourning (*wale matenga*). On one foundation are still seen the holes into which the wall posts of the house fitted; on another, rotting wooden posts from the dismantled house are lying on the foundation.

Within each cemetery, the graves are of three types: the modern Christian, enclosed, boxlike grave; the rectangular, open grave accorded formerly to people of rank; and the two-stone grave accorded formerly to commoners (pl.2,*B*).

Former custom was to bury with head to the east, feet to the west. Graves of chiefs (*alibi wolo* and *uui alibi*) were marked by eight stones—two at the head, two at

I:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

sites. The only sites worth excavating on the atoll were old graves, but the fear of ghosts is so intense that none would allow such excavation for fear of punishment—possible death—by outraged spirits of the dead.

That such excavation, however, might be extremely fruitful is shown by an involuntary excavation that occurred during our stay on the atoll. Yepina, assisted by relatives and friends, was digging the grave for his grandson in a Ngake cemetery. A near-by grave which contained the skeletons of two young girls buried before white contact was unintentionally struck. Talainga, who was assisting, asked one of the men present to go to Yato to call me to see the objects contained in the grave. But Yepina, being in a hurry and feeling that he had committed an act of desecration in so clumsily opening the grave, refused to allow the messenger to leave the place. All the men present concurred, saying they had no wish to be plagued to death by the spirits of the two girls. Before Yepina covered the grave, Talainga was able to make rough sketches of a few of the objects in it and to note down others that he saw.

Among the objects close to the skeletons were one large basaltic adz; several *Tridacna*-shell adzes; many fishhooks including three pearl-shell hooks, two with barbs, the other a plain hook of the *tope* type; several shanks from composite pearl-shell bonito hooks, one with two projections on either side of the distal end of the shank; several pearl-shell points, evidently original parts of the same hooks; many pieces of pearl shell of different shapes which were probably at one time strung together to make the pearl-shell ornament called *mua titi ui*.

Talainga suggested when he told me of the incident that there were many more objects in the grave than he could note, so determined was Yepina to repair his error. General opinion was that the two girls must have been favorite children of a sorrowful father, who buried a wealth of objects with the two corpses to show the depth of his sorrows.

WORKING IN WOOD

Implements used by the Pukapukan craftsman for working in wood include the *Tridacna*-shell adz, the drill, a shell awl, a whale tooth or coral rock mallet, shark or ray skin and coral scrapers.

Adzes

Adzes (*toki*) were made of *Tridacna* shell (*ngalipayua*), as shown by Macgregor (20,fig.13).[1] They were attached directly to the haft (fig.21). No rotary or movable adz was known.

Basaltic material from which adzes might be made was not available on the atoll. Legends of early canoe voyages relate that returning Pukapukan navigators brought back to the atoll stone from which adzes were made. At any time, the number of these on Pukapuka must have been small, and they gained in value both from their more durable quality as working implements

[1] [See 2! McGregor, p. 46 — analyst.]

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

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and from their scarcity. The quadrangular basaltic adz figured by Macgregor (20,fig.14) was picked up on the outer beach of Wale. It is similar to Samoan type I adzes (27,p.334) and was perhaps imported from Samoa. A second basaltic adz was seen by Talainga in the old grave unintentionally opened. From Talainga's description and rough sketch this adz appears to be a triangular one, perhaps corresponding in shape to the Samoan type VII or VIII (27,p.351). It was 10 inches long, the back ground smooth, the front roughly chipped, and the poll rounded. The depth of the bevel was about 2 inches.

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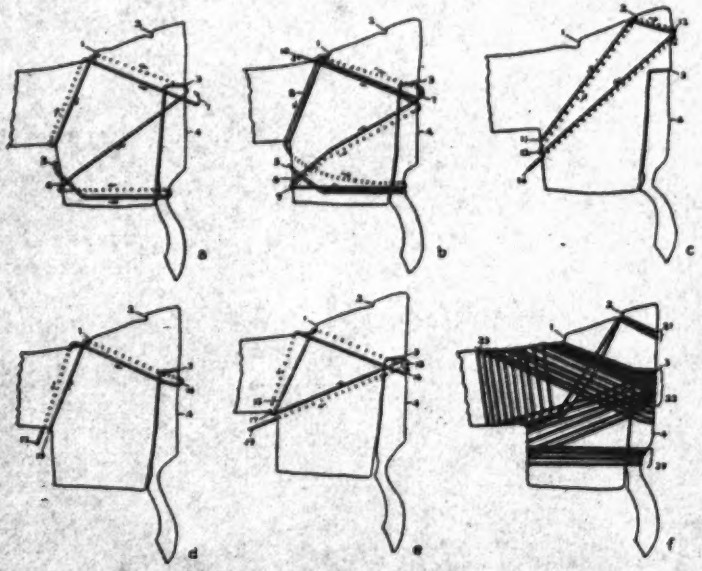

FIGURE 21.—*Tridacna* shell adz (C8105) with haft of *urohanoa* wood; length of haft from toe angle to slightly flared butt, 19 inches; haft round in cross section, average diameter being 1⅜ inches; at heel angle a prominent longitudinal ridge runs up to point of heel; above heel angle (see *a*) is cut a notch (1) to prevent lashing from slipping; ¾ inch below point of heel a second notch (2) is cut, also to prevent lashing from slipping; 1¾ inches below point of heel on foot of haft is cut ⅛ inch deep shoulder (3), against which adz (4) fits to avert slipping when in use; because of irregular shape of poll of adz, shoulder is cut transversely on foot, so that distance from heel point on one side is 1¾ inches, other side 2¼ inches; lashing material three-ply sennit braid ¼ inch thick. *a*, lashing commencement: commencement end of sennit (5) laid under toe angle, free end passing transversely around near side of toe and back across far side of toe and brought across toe angle to near side; grips commence-

i:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

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ment end, and passes at 6, on near side, diagonally up to shoulder (3) where it grips poll of adz, passes across far side of heel, and is brought to near side over notch 1, across to toe angle; it makes a turn under toe angle, passes to notch 1, on far side, and then across heel on near side, gripping first diagonal turn of (7) of sennit from toe to heel. *b*, continuation of lashing: free end (7) passes across shoulder (3) and across heel to notch 1, where it is brought across to near side and down (8) to near side toe angle; from toe angle it passes to far side of toe and makes a transverse turn around toe, coming back on near side and passing under toe angle (9) to make diagonal turn on far side up to shoulder; brought around shoulder to near side and passes across heel (10) to notch 1, where it passes down far side of heel to make further turns, as described, until four complete turns are made of which, for clearness, only two are shown in *b*. *c*, lashing of point of heel: fourth completed turn brings free end of sennit into position at 11, to make two turns around point of heel; sennit passes diagonally across near side of foot from toe angle to heel, crosses to far side of heel at notch 2, passes across heel and is brought to near side of heel (12) and diagonally down on near side to toe angle; sennit crosses under toe again (13), runs diagonally up to heel on far side and is brought across notch 2, to near side of heel, then across heel and diagonally down on far side to toe angle (14); sennit then ready to make two more turns, repeating diagonal movements between toe angle and heel; four diagonal turns in all, of which only two are shown in *c*. *d*, continuation of lashing: last turn of diagonal lashing brings sennit into position (15) for further turns; sennit passes on near side from toe angle to notch 1, where it lies on top of turns made as in *b*; sennit crosses to far side of heel, then crosses heel to shoulder (3) and goes around to near side of heel and across heel to notch 1 where it passes to far side of heel and down to toe angle (17), forming lower loop (16) of this phase of lashing. *e*, sennit (17) comes around under toe angle and goes diagonally across to heel; turn continued around heel to far side to make upper loop (18), then diagonally down on far side to toe angle; this brings sennit (19) into position to repeat turns as in *d* and *e*; altogether six turns are made, lower loop alternating with upper loop, and free finishing end of sennit brought up on near side of toe angle and buried underneath last two turns at heel angle. *f*, completed lashing: 20, first four turns made around toe, binding lower part of adz to toe of haft; 21, four diagonal turns around point of heel and notch 2; 22, final six turns, alternating lower with upper loop; 23, point where end is buried to complete lashing.

Drill

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The pump drill (*wou*) was formerly used to drill holes in wood and shell. It was of a common Polynesian design (fig.22).

To drill a small hole or to drill fragile articles, a light balance was required; for this purpose one half of a dry coconut shell was put on the shaft by pushing the shaft through the soft eye of the shell, the eye part of the shell pointing downward, the open half of the shell pointing upward. To drill a large hole in hard material, a heavy balance was used, the wooden balance on a drill being reenforced if necessary with extra weights of wood.

[177]

The point of the drill was of shell or iron. Informants were at pains to point out that the Pukapukans were aware of iron long before white contact. They procured nails from pieces of boat wreckage which from time immemorial have drifted onto the outer beaches. They burned the wreckage and combed over the ashes for nails hammered into the wood.

To drill is also *wou*. The worker started a hole by holding the shaft of the drill between the palms of the hands and rotating it. When he had made the slightest depression to hold the point, he worked the drill with the pump handle.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

Scrapers and Rasps

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Scrapers for smoothing wood were formerly selected pieces of coral (*punga*) with rough surfaces (*talatala*). The smoothing (*oloolo*) was done with the wooden object submerged in sea water in order to soften the wood. The first scraping was with the *punga* coral, the finishing scraping with a piece of *hana* coral which has a surface covered with tiny, sharp "teeth".

The use of wood scrapers to which shark or ray skin is lashed is modern in Pukapuka. Informants stated that although shark skin was used formerly for fashioning pearl-shell hooks, the idea of using it for smoothing wood was introduced from Samoa.

WORKING OF SHELL

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Mother-of-pearl shell is termed *si*. Other bivalve shells of about the same size and shape as pearl shell are also termed *si* with an added adjective, as in *si pakayau alango*, to distinguish them from true pearl shell. Pearl shell is procured by grasping the shell with the hand and twisting it to break the tentacles. Thick shells were used for composite pearl-shell hooks, thin shell for ornaments and for single-piece shell hooks.

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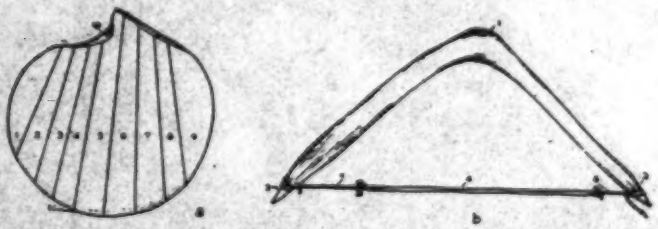

Figure 23.—Division of pearl shell; shell file. *a*, shell regionally divided into nine sections by cutting radially from hinge (10) to lip (11): preferred shanks for composite hooks cut from sections 4 to 7, other shanks from sections 1 to 3, 8 and 9; shanks for small composite hooks, single-piece hooks, and shell points for composite hooks cut from lip half of shell; named sections: 1, *tuvo*; 2, *patuau*; 3, *pa hi te mua*; 4, *wyololoto*; 5, 6, 7, *wyoloto*; 8, *iyumotu*; 9, *ohuvo*. *b*, shell file (*kosana*) of shark skin (C8037): 1, frame, small branch of *vukanavu* wood with limbs 11 and 9 inches long; 2, 3, ends of limbs pointed and notched; 4, curled shark skin, 9½ inches long, ¼ inch diameter; 5, 6, suspension cords of two-ply twisted sennit, knotted to ends of shark skin, passed transversely around ends of limbs three times and knotted.

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The whole pearl shell (*itu si*) is regionally divided by the Pukapukans into nine named parts (fig. 23, *a*). Radial sections cut through the hinge of the shell along these regional divisions are used for the shanks of bonito trolling hooks; the lip ends of these radial sections are used for small composite hooks and for bonito points.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

321 The shell is cut along the section lines with the turtle-shell cutting implement (*taku*) or with a similarly shaped implement made from *punga* coral (*taku punga*). The edge of the blade is rubbed back and forward along the division line judged with the eye. A scratch is soon made on the nacreous surface of the shell. By further rubbing along this scratched line and by the addition at frequent intervals of water and sand, if the cutting implement is turtle bone, a narrow groove is formed which is finally deepened until the shell is cut through. A cut section of shell is shaped by rubbing and grinding with coral stone and water. Later the shape of a hook is filed out by the use of the shark skin rasp (*kuuna*).

To smooth the outer convex surface of pearl shell, the shell is rubbed on a large piece of *punga* coral placed on the ground in front of the worker. Water is used copiously on the rubbing surface. At intervals the shell is dipped into a bowl of clear water or the surface of the shell is rubbed with the fibrous end of a ripe pandanus key to test the sheen and the stage of polishing reached. When the worker is satisfied that he has procured the desired color, he gives the surface of the shell a final polish by rubbing it vigorously with a dry pandanus leaf.

Lashing or suspension holes are made in shell pieces by the use of the pump drill.

Informants could suggest no ceremonial used in the manufacture of pearl-shell ornaments or composite hooks.

321 The shark-skin rasp is prepared as follows:

412 The skin of a freshly killed fish is submerged in fresh water for about eight days.
281 The skin is pegged out in the sun with wooden pegs until thoroughly dry. It is cut into pieces of suitable length and attached to a forked branch. A piece of skin that is flat longitudinally and transversely is attached to a branch to make the *kauana olo* used for smoothing and polishing fishhook shanks. For the *kauana uunga* which is used to cut out the curves of composite hook points and the bend of a single-piece hook, a piece of shark skin is scraped on the fleshy surface to remove the stiff membranes. This allows the skin to curl transversely and produces a file, round in cross section (fig. 23,*b*).

Shark skin is used for all purposes where a coarse abrasive is needed. The tail of the black ray (*uui kowe*), also used as a file in the manufacture of pearl shell, is preferred by some because it lasts longer than shark skin.

CANOE CONSTRUCTION

501 Two types of canoe are used in Pukapuka today. One, the simple, one-
322 piece, dugout canoe, is used for fishing inside or outside the reef. The
211 other, a plank canoe with washstrakes and bow and stern covers, is used for fishing and for making expeditions to the islets of Ko and Kotawa. Canoe making is a craft still very much alive in Pukapuka and most households possess two or more canoes, one a dugout, the others larger plank canoes.

177 The single-piece dugout (*poti pukaua*) does not seem to be an old style
501 canoe. The only name for it is *poti*, a word probably derived from the English word boat; if this derivation is correct, it is evidence in support of informants' contention that the canoe style is new. Informants suggested
322 that formerly there were not sufficient big trees on the atoll to enable craftsmen to make single-piece canoes. The *poti* in use today is a simple hull balanced by outrigger and two cross booms.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

about the hull joins is seldom dry, and after about 10 years the wood becomes so rotten that the flanges break apart. The only remedy is to take the canoe apart, adz off the rotten sections of wood, and rejoin the canoe as a *vaka tui tuta*. The sennit lashing of the *vaka tui tuta* lasts about seven years before it rots. It is easily replaced if care has been taken of the canoe and the wood round the joins has not become rotten through unsuspected water seepage.

The customary Pukapukan canoe for deep-sea fishing or voyaging was the single outrigger canoe. At various times, however, the double canoe (*taulua*) was made and used, particularly for regular fishing trips to Tima Reef. A time is remembered when three double canoes were in commission on the atoll. Tradition seems to indicate that the art of making double canoes was introduced by returning Pukapukan navigators. The chief Wue (who lived about 14 generations ago) is reputed by some to have been the first man to build a double canoe in Pukapuka; he modeled it after one he had seen in his travels abroad. Lack of sufficiently large timber is given as the reason why few double canoes were built. No informant had seen a Pukapukan double canoe. The following brief description is based on traditional information only:

> The larger of the two canoes was to leeward and carried the two masts. The smaller canoe acted as an outrigger and was to windward. Cross booms (*kaukau*) joining the two canoes were probably logs of pandanus, three booms being necessary to provide a stable support. Both canoes were completely decked with logs of *puapua* wood, save for holes or hatchways that served as bailing cockpits and gave entrance to stores and fishing gear loaded inside the hull of the windward canoe. Diagonal cross braces from the stern and bow of each canoe to the fore and aft cross booms were termed *tokoi*. A platform (*papanga taulua*) laid across the booms was occupied by the crew and passengers who also used the leeward canoe for shelter. On one part of the platform was placed a small house which functioned as a god house (*wale atua*). No details are preserved of lashings or sizes of these double canoes. But it is likely that the reason the single outrigger was the preferred canoe is that it could be made more seaworthy because the outrigger could be more strongly lashed to the hull than on the big and unwieldy double canoe. The double canoe was steered by two or three steering paddles, one man steering from one canoe and the second man from the platform between the canoes. Should a sudden turn be desired, the two steersmen were reenforced by a third who assisted from the stern of the second canoe.

To change the direction of any canoe is *wuli* or *wuwuli*. The change of direction is to starboard (*ki katea*) or to port (*ki ama*). The bowman calls out the direction of change thus: *La ama!* or *La katea!* When the required direction is defined, he calls out: *Tawi ai!* (Hold it now!)

Variations on the fundamental construction pattern of the Pukapukan canoe are few:

> In one single-piece dugout canoe, rather large for its type, greater stability was given to the two outrigger cross booms by projecting the ends of these booms about 18 inches beyond the starboard side of the hull and lashing to these ends a longitudinal

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

227/284 of the hook. The hooks are made from black- or gold-lipped pearl shell and provided with snoods of *wau* cord. They may be classified by shape into three types: a U-shaped hook, a circular hook that is usually barbed, and a slanted U-shaped hook that may be barbed.

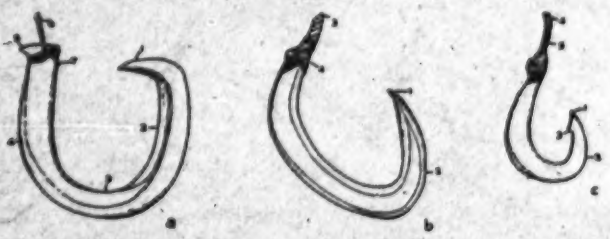

FIGURE 58.—Shell fishhooks. *a*, pearl-shell hook (*yeki kaloma*) (C8158): hook 3/4 inch high, 1/2 inch wide, and 1/8 inch thick; point (1) short, making point-shank clearance comparatively wide; inner and outer surfaces of point limb (2), bend (3), and shank (4) beveled; shank knob (5) flush with proximal end of shank; snood of finest two-ply twisted *wau* (6) fastened to shank by three transverse turns with free end of snood line which effectively holds snood fast to shank; finishing end (7) tucked under turns and held tight; bait string (not shown) of *wau* fiber wound around bend of hook. *b*, barbless, slanted U-hook (*tai wau*) of gold-lipped shell (C8224): hook 1 inch high, 3/4 inch wide; edges beveled, but owing to irregular shape of shell, point directed away from mesial longitudinal line of shank; point (1) bends slightly from point limb (2); wide point-shank clearance; snood (3) of *wau* cord fastened to shank by lashing meant to be descending figure-of-eight turns, but very irregular (4) owing to fact that worker suffered from bad eyesight. *c*, pearl-shell hook (*wakaolo yi kakai*) for albacore (C8164): hook 2 inches high, 1 3/4 inches wide; edges beveled; point (1) bends slightly from point limb (2); barb (3) runs from point at acute angle, barb-point edge straight, beveled slightly; wide point-shank clearance; snood (4) of three-ply *wau* cord fastened to shank with descending figure-of-eight turns; finishing end of lashing seizes snood for length of 1/2 inch at 5.

226/177 **U-shaped hooks.** Small U-shaped hooks (*yeki*) are used for beach angling and for catching the smaller lagoon fish by other fishing methods.

An example of the *yeki* hook (fig. 58,*a*) is minute and almost as wide as it is high. It was used for catching *kaloma* fish before European pins came into use. It is a beautifully made hook and shows craftsmanship of high order. The term *yeki* is applied to hooks of this general shape up to about 1 or 1 1/2 inches high when the name *tope* comes into use. *Tope* hooks are U-shaped, but tend to be higher than they are wide. The name is also applied to hooks of other material such as turtle shell or coconut shell which have this general shape. The type *tope* hook of pearl shell is shown in figure 30,*a*. Other *tope* hooks in the Bishop Museum collection range in height from 1 1/2 to 1 3/4 inches and in greatest outside width from 1 inch to 1 1/2 inches. They are made of gold- or black-lipped shell; descending or ascending figure-of-eight lashings attach the snood of two- or three-ply *wau* cord to the shank of the hook. They are provided with bait strings.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

TOYS AND SPORTS EQUIPMENT

524 824 171 Pukapukan children are clever at making original toys from coconut leaflets. Coconut leaflet toys, made by children according to the technique described for Aitutaki (26, pp. 318-322), include the leaflet Jew's harp (*vivo*), the windmill (*poteka launiu*), the leaflet bull roarer (*wakatangitangi*), and the leaflet spinner (*wakaki matangi* or *wuti lele launiu*). Whereas the Aitutakian spinner is made with a collar and suspended with a banana leaf fiber (26, p. 321), the Pukapukan spinner is closed by skewering the two leaflet ends together with a piece of coconut leaflet and is suspended by a strand of human hair knotted to a thin length of coconut midrib.

A trick figure made from a strip of dried coconut leaflet is termed *te tionga a Maui* (fig.49,*b*), because the gods gave this figure to Maui to see if he could disengage the two leaflet sections when they were testing out the culture hero. Children and adults spend much time trying to solve the puzzle, without success however, for the solution, if ever there was one, is now lost.

A coconut-leaflet trumpet (*pu launiu*) is made by Pukapukan children. Leaflet midribs are stripped from eight or more coconut leaflets:

> The leaflets are rolled spirally into the shape of a cone, successive leaflets being added by overlapping the ends. When a trumpet of suitable size has been made, the free end of the last leaflet is skewered to turns underneath with a small fishbone or splinter of wood. A reed made by doubling a piece of leaflet along the mesial transverse line is inserted into the mouthpiece of the trumpet.

A favorite toy made during our stay was leaflet spectacles which children perched on their noses, pretending they improved their sight.

524 177 Two types of ball are in use: one is a round ball made of *makanava* wood used in cricket; the other is a somewhat square object made by covering a stone with plaited check coconut leaf. Both balls are termed *bolo*, a name presumably derived from the English word "ball". Either the old name for the ball has been forgotten, or the ball is an introduced toy.

Coconut-cup shoes (*tai ngaipa*) are made by threading a length of pandanus or sennit through the eye of a half coconut shell. The foot is placed on the shell and the cord passes to the hand between the big and second toes. 526 Children wear these shoes today for sport, but informants said that formerly adults occasionally held coconut-cup foot races during the time of merry-527 making that introduced the six months of pleasure.

177 Wooden stilts (*lole*), said to be introduced, are sometimes used by children.

524 The toy bow (*uvua*) and arrow (*ti*) made from coconut-leaflet midribs is an introduced toy. Marbles were also unknown formerly, but today children use as marbles (*pei*) seeds from the *wetau* tree.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

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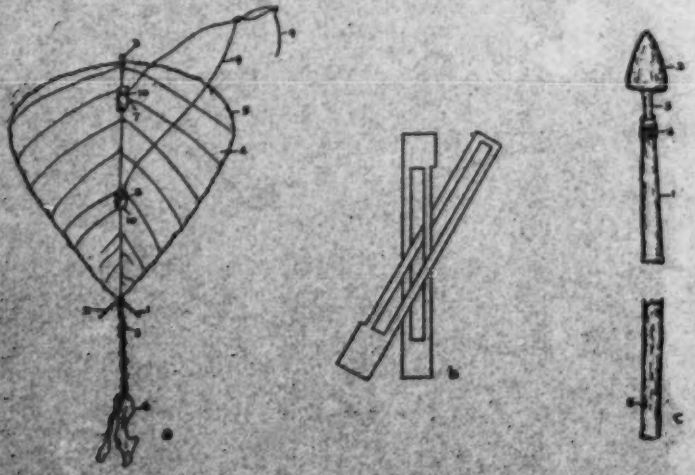
171 Swings (*talakelake*) are made by suspending a crossbar of *ngangie* wood by a sennit rope from a branch of convenient height. The swing is supposed to have been introduced originally by the voyager Wue on his return to Pukapuka. No skipping rope was known.

Noise makers (*pulaka mana*) are made by cutting shallow longitudinal slits on a length of *pulaka* stalk. The flanges so made are raised. With the stalk held in the left hand, the flanges are knocked down in succession with a sweeping blow of the dorsal side of the right hand. A loud noise results as each flange is leveled.

Pop guns (*mana*) are made by inserting a piston into the hollow core of a dry *ngayu* branch. The seed of the *taeyinu* tree or a piece of mature coconut flesh (*ipiipi*) is inserted into the branch and the piston sharply pushed down on top of the seed to produce a loud report. Another pop gun is made with the hollow wing bone of the *takupu* bird, a piston of *puapua* wood, and *taeyinu* seed or *ipiipi* to produce the report.

526 A surf board (*papa*) is any flat piece of wood of about an arm's length on which arms and chest are rested when surfing. No elaborate long boards are used, nor does the surfer ride in any position but the prone one.



524 284 FIGURE 40.—Toys and composite dart. a, kite (*kelle*) of *puapua* leaf (Cibotium); coconut leaflet midrib (1, 2) bent into required shape and fastened to another midrib (3) by strips of coconut fiber (*kaiava*); edges of large *puapua* leaf (4) bent over this frame and fastened to it by continuous thread of fiber (5) which passes through leaf and around frame midrib; center midrib (3) extends below apex of kite and to this a tail (6) of two dried coconut leaves fastened by transverse turns of fiber; at two points

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

613 771 Neither paternal lineage nor sub-lineage was exogamous or endogamous. Intra-marriage was governed by rules of consanguinity. No totem objects or prestige symbols were associated with any of the paternal lineages. Certain gods were associated with the paternal groups. (See p. 308.)

613 591 621 The amount of lineage localization in the two villages for which information is available is comparatively large, as is to be expected from the operation of the rule of patrilocal marital residence. Of 39 male heads of households in Ngake whose residence is patrilocal, 37 men or 95 percent are members of the two Ngake paternal lineages, Muliwutu and Matanga. In Yato, 27 out of 33, or 82 percent, are members of the three Yato paternal lineages, Yamaunga, Yayi, and Yalongo.

613 731 173 There is no mythological account of the origin of the patrilineal lineages. Informants make the simple statement that after the seismic wave that devastated the island thirteen generations ago, only 15 men and their families were left of the original population. From these men the present population has descended. Seven of the men founded anew and named patrilineal lineages from which, by a process of fissure when numbers became great, other minor sub-lineages split off. Nothing is known of the lineages previous to the seismic wave, but informants presume that there were in existence similar named patrilineal lineages.

613 Various instances of irregular lineage membership came to my attention.

[563] Children of a Pukapukan woman and a non-Pukapukan husband, white or native, go to the mother's cemetery for burial; the husband also acquires membership in his wife's paternal lineage.

264 848 One Pukapukan whose wife is deceased, has remained, together with his children, in residence in the household of his father-in-law. For reasons of sentiment, he has arranged with his father-in-law for himself and his children to be buried in his late wife's cemetery, the cemetery of his father-in-law.

The child (*tama to taha*) of an unmarried mother is a member of its mother's paternal lineage, unless later adopted by the mother's husband when she marries. A child conceived out of wedlock, but born after its mother's marriage to a man not the [851] physiological father of the child, is regarded as the child of his mother's husband and is a member of his paternal lineage; the husband becomes the sociological father of the child.

613 597 764 122 X is a *tama to taha*, adopted into the paternal lineage of his maternal grandfather's father. His grandfather does not belong to that group, having been adopted into another. X's mother belongs to the lineage into which her father was adopted. Wishing for sentimental reasons that her son and offspring go to the same cemetery as her father, she is going to substitute for her son, and be herself buried in the lineage-cemetery into which he was adopted, so that he and his line may exchange groupings with her.

Only one instance is on record of sharing children between the lineages of the father and of the mother. The siblings—father, father's sister, father's brother—in household 15 of table 5, all belong to the paternal lineage of their mother. Three siblings, now dead, all went to the father's paternal lineage. No adoption was involved in this division of the children among the two groups. It was specifically described as an idiosyncrasy on the part of both parents for which no motivations could be advanced today, as the arrangement was made about 55 years ago. It is possible that the division was influenced by southern Cook Islands practice.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

The part played by the paternal lineages in regulating marriage, descent, succession, and inheritance, and the relative importance of maternal and paternal lineages in social organization are discussed elsewhere.

Close bonds unite a man to his paternal lineage and to his burial ground. Admittedly, he inherits land, coconut trees, and houses through his father, but beyond this, there is a real sentimental bond binding a man to his paternal grouping. It is always the paternal lineage and never the maternal lineage of a man that is mentioned at the beginning of each genealogy or story; informants somehow felt that by naming his paternal lineage, the hero of the story was placed and his status in the community accurately defined. The resident agent has had great difficulty in persuading the people that some cemeteries are too close to the villages to accord with ideals of modern public health. The conflict has become acute when the agent has insisted that the cemeteries be closed or the villages moved elsewhere. Either alternative has seemed impossible to the people of the lineage affected, and in one prohibited cemetery a burial was prevented only by placing the Union Jack across the already gaping grave and appealing to the loyalty of the people not to touch the sacred emblem of Pax Britannica.

The paternal lineage does not seem to possess any formal structural organization. There is no council of the men of the group. Formerly each lineage had its constituted priests who worshiped the gods of the lineage in religious structures erected on lands of the group. Each lineage had a secular leader, with the rank, in a minor lineage, of sub-chief (*langatila*), in a major lineage, of high chief (*aliki*) or chief (*nui aliki*). (See pp. 234-237.) Doubt exists in the minds of informants as to whether the word *langatila* is a Pukapukan word; some informants insist that it is not and that the correct designation for a minor chief was formerly *nui aliki*, a collective word also applied, apparently, to an individual. Today *langatila* and the Rarotongan word *mataiapo* are used to designate the two groups of minor chiefs.

LINEAGE AND VILLAGE

For feasts, sports, and games, the community divided itself into smaller units based upon paternal lineage (*yolongo* unit), maternal lineage (*una* unit) or village membership (*matoyinga* unit, sometimes called *lulu kakai*), depending upon the specific activity. Membership in the *yolongo* unit is modified by the rule of patrilocal residence so that children adopted elsewhere and members of the lineage married into another village are excluded while persons residing with the patrilineal group through marriage or adoption are included.

Team membership for fishing and sporting contests was formerly always based on maternal lineage membership. One moiety contested against another moiety. At a later

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te tini aliki (the many chiefs). The remainder of the community were without rank and were simply called *te kau* or *te tama* (the people or the children). The chief's executive (*wola*) was next in rank to the supreme chief, but his position was not hereditary. Informants stated that each of the several subordinate chiefs had an executive (*wola*) to advise him. These sub-executives were the oldest men (*tupele*) of the several villages and chiefly lineages and shared priestly functions with the minor chiefs whom they served. It is possible, however, that informants were unconsciously magnifying the former status of minor chiefs in order to glorify their own lineages; or else they were generalizing about the status of these chiefs in terms of a particular historical set-up when a minor chief may have assumed some of the powers which properly belonged solely to the supreme chief of the island.

Another ranking official sometimes spoken of was the *yula*, a name which appears only in connection with Tuiva, who acted as a sort of regent or supreme head of the island during an interregnum in the line of the high chief. It is possible, however, that the *yula* was formerly a high-ranking peace officer, deputy to the chief, without priestly functions. Informants are unclear as to his position at times other than during the regency of Tuiva.

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The chiefly set-up in former times varied from that of today.. Formerly, probably up to the time of white contact, the chiefs of the island were:

Village	Paternal Lineage	Chiefs
Ngake	Muliwutu	One aliki (chief), one langatila (sub-chief)
	Matanga	One aliki, one langatila
Loto	i Tua	One aliki wolo (supreme chief), one langatila
	Yangalipule	One langatila
Yato	Yaloogo	One aliki, one langatila
	Yamaunga	One langatila
	Yayi	One langatila

This gives a total of one supreme chief, three other chiefs, and seven sub-chiefs. The number of sub-chiefs (*langatila*) may at times have been larger, because a powerful paternal sub-lineage could well have claimed the right to nominate its own minor chiefs. No record survives to enable this question to be settled. With white contact and the control of the island by a resident agent and nominated council, changes have been made in the number and names of the chiefs. The Cook Islands term *mataiapo* has been introduced as a name for the minor chief. The present set-up includes one supreme chief (*aliki wolo*), seven other chiefs (*mataiapo*), and four sub-chiefs (*langatila*):

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made a right choice. Apparently no chief was ever deposed; hence the reigns of the chiefs of all the lineages must have been, in general, equally prosperous. In accounts of traditional history it is usual to find the chief displaying supernormal powers, bestowed by the god of his lineage.

In former times, as today, great rivalry was felt between the various lineages of the island, especially between those lineages headed by chiefs. Up to the time of the great seismic wave, no chief was superior to the rest. There was, rather, a shifting balance of power between the four chiefly lineages, temporary superiority going to that lineage which through the intrigue, personality, and strength of its chief, combined with numerical strength of its members, managed to gain predominance for the time. The chief of such a lineage would then claim to be the supreme chief of the island. His claim might be disputed, but as long as he was manifestly superior to the other chiefs nothing would be done about his pretensions. It was only after the seismic wave, with its catastrophic effects, that i Tua seems gradually to have assumed a dominance over the other three chiefly lineages. In the inter-lineage adoption that occurred after the seismic wave, a child from the strong lineage of Muliwutu was adopted into i Tua, to insure the continuation of this chiefly line; this seems to have lined up Muliwutu behind i Tua. With this support, i Tua became dominant and constituted itself the lineage of the supreme chief of the island, a status which it has retained to this day. As a lineage of the supreme chief was politically dominant, so were its gods preeminent over the other lineage gods. Mataliki and Taua, the major gods of i Tua, may then be considered the major gods of the island; they were most often called upon by the supreme chief to provide favors for the island as a whole. Nevertheless, the other chiefly lineages, particularly those of Ngake, have never completely acquiesced in either the political or religious dominance of i Tua.

Political Control

The functions of the three governing groups on the island may be summarised as follows:

Village meetings (*wakapono lalu*), attended by the chiefs, sub-chiefs, and all adult males of the village, discussed matters affecting the village and the reserves, and settled intra-village disputes. Meetings of the old men's group (*wakaponongo no te tupele*) discussed island affairs. Meetings of the chiefs (*wakaponongo a te ui aliki*) discussed island and inter-lineage matters. The division of functions between these governing bodies is not clearly remembered today when the government of the island has been so completely transformed by the resident agent and his nominated Island Council. Informants believed that the supreme chief called the minor chiefs together at unspecified times to discuss matters referred to him by the council of old men (*tupele*). All decisions of the old men were presented to the high chief or the council of chiefs for final approval. Whether or not this approval was nominal depended on the prestige and power of the high chief. Notwithstanding, the final veto seems to have rested with

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a weakling, he asked a powerful friend to wrestle for him. If one woman slandered another, the injured party followed the other to the bush where she tried to beat her with a stick, or else fought her with her hands, trying to tear out her hair or otherwise pain her. Sometimes the injured woman tried to seduce the husband of the slanderer. If she succeeded, she publicly humiliated the slanderer by announcing that she had seduced the man, telling also the reason why.

Today, the Cook Islands Act has superseded old-time law. The taro beds and the reserves, however, are still administered by the guard, which levies fines on those caught stealing. One day during our stay, the women's guard from Loto came en masse to Yato and accused a Yato woman of stealing taro from Uta. The Yato woman confessed, and was immediately fined six *uto* nuts or three pennies. She handed over the nuts, and all were satisfied. In their report to the village each night, the guards mention the names of persons who have trespassed on reserve lands.

THE HOUSEHOLD

The native definition of a household is that group of people which use the same cook house. Three households (households 8, 44, 49) described by informants constitute variations on this pattern. (See table 5 and p. 249.)

The number of sleep houses all grouped together on the same lot and occupied by the same household unit depends on the size of the household. Where there are several sleep houses the parent or parents and unmarried children, blood or adopted, sleep in one house; a further grouping occurs in terms of relationship, age grades, and personal choice. A married son or daughter generally sleeps with his family in a separate house.

Composition

The relationships of the persons making up individual households studied is shown in table 5. The 54 households of Ngake and Yato give 38 distinct groupings of kin:

Ten households are composed of mother, father, and children. Seven households are composed of mother, father, and adopted children. Two households are composed of mother and children, mother in household 16 being a widow, and in household 41, a divorcée.

The biological family of mother, father, and children is the basis of the composition of 27 of the 54 households. In 13 households, mother, father, and adopted children is the basic unit. In only six households does the combination of father, mother, children, and adopted children occur.

Outside these groups, the most common household member is the son's wife. One son's wife and one daughter's husband (household 8) have, with their children, remained in residence with their father-in-law though their mates are deceased. It is further noteworthy that these two, the (deceased) son's wife and the (deceased) daughter's husband, are brother and sister. No explanation of their residence was given by infor-

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601 (before, first), *loto* (middle), *muli* (behind, after) it is possible sufficiently to indicate seniority differences according to the Pukapukan pattern. The word *tautua* is occasionally applied by an older brother or sister to a younger sibling of the same or opposite sex. There are no special terms other than the descriptive words just given indicating seniority in cross sex reference; thus a younger brother calls an older sister *tua wawine mua*. Today, with [177] the breakdown of the native system, Rarotongan kinship terms indicating seniority are commonly used. Sex differences on the zero stratum are indicated by the use of the terms *taina* between siblings of the same sex, *tua tane* or *tua wawine* between siblings of the opposite sex. Some informants tend to apply the term *kainga* (to be distinguished from the term *kainga wakama*, which indicates cousins of opposite sex) to siblings of opposite sex. In this sense the term is constantly used in folk stories, but one at least of our best informants did not agree with this use of the term, and others changed their opinion several times during the course of temporally separate discussions about the matter. Sex differences for other terms are indicated by the words *tane* and *wawine* for male and female respectively.

Descriptive terms are used to indicate remote relationships on each stratum if exactness of reference is required. Affinal relatives generally, at the zero and minus one stratum, are called *tao tangata* and *konga tangata* respectively. These words refer to close relatives by marriage connection, not by blood. A child of an unmarried mother is a *tama to taka;* spouse's child by another man or woman is *tama tau tokalua*. Conversely, blood mother or father's mate is *matua tau tokalua*. Blood parents are *matua wawau* as opposed to adoptive parents, *matua lave*.

The eldest child, male or female, in a family is called the *uluaki*. *Ngaloto* is applied to the second child in a family of three or four children; to the second and third children in a family of five children; to the second, third, and fourth children in a family of six children. *Taina* is used for the next to last child in a family of more than three children. *Wakamuli* is the last child in any family. *Aukimua* is the heir apparent in the chiefly family, the boy either chosen by the father or generally reckoned to be the child likely to succeed to the title. *Angavale* (grandchild) is a term with more affectionate feeling tone than the colorless word *makopuna*.

In spite of the strong matriliny in Pukapukan society, there is no special term for mother's brother, nor any indication of special obligations or privileges between mother's brother and sister's child, corresponding to the *tamasa* or *tasi* relationships of Samoa and Fiji. The word *ilamutu*, however, has meaning for the Pukapukan:

It is now an archaic word, found only in old chants, and not in current usage. A man's adopted child (*tama kokoti*) of either sex who is the blood child of a female blood relative of his own generation—that is, of his older or younger blood sister, or of his

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602 The consciousness of the breaking of a tapu is clear from the man's remark in this
835 chant that his love for his *wale atua* is *kai kumanga* (food of shameful abnormality) and, further, *kai walanga* (incest).

No reference to *wale atua* incest is found in any of the myths or folktales recorded.

182 The kinship tapus are best preserved today among the older people.
602 Among the younger generations, several *wale atua* have married:

588 In one such marriage, the husband had to trick his protesting relatives by being
177 secretly married. This was only possible because the Cook Islands Act allows *wale atua* to marry, and the resident agent had to perform the civil rite. Another marriage occurred just before we left Pukapuka. The bride's mother's brother refused to attend the marriage or to have anything further to do with his classificatory daughter. The groom's father at first objected because he feared the marriage would be sterile, probably owing to the breaking of the tapu, and his descent line depended on issue to the marriage. His fear was increased by the fact that though his son had been courting the bride for several years, no child had been born. The father finally yielded to the entreaties of missionary friends. Wiseacres predict that the marriage will be sterile, which is the very best that can be hoped for, apart altogether from visitations of sickness.

602 No purpose is served by traversing at this stage the actual functioning of the kinship system. It presents no features that call for special comment. Economic obligations associated with kinship relationships are discussed elsewhere. Similarly the importance of the kinship group in personal ceremonial is mentioned in the description of rites at birth, marriage, and death.

THE LIFE CYCLE

BIRTH

Conception

842 Conception is known as *te tuhatitinga o te tama* (the placing in of the child). The period of gestation is called *te tuhatitinga* or *te ikonga*. The primary meaning of the word *iko* is "to germinate" as in the sentence: "Ko te nene ko iko ai te tama" (it is the semen which makes the child germinate). The following is a typical explanation of conception given by a woman informant:

842 Conception involves an organ (*mama*) in both the male and female (*mama* is given
831 elsewhere as meaning "lung"). The male secretion enters the female *mama*, the female
753 secretion enters the male *mama*. The informant was unable to specify the exact location of this organ, though she thought the native practitioners would know. On being pressed to indicate the locus of the *mama* in her own body, she pointed to her stomach
833 and said the *mama* was close to it. She knew that it is the semen that germinates the ovum, but could give no rationalization as to the method. She also said that it is the *mama* which generates the male and female secretions, and should this organ dry up, as it often does, then the person affected becomes thin and sickly, suffering from debility. This is a common disease in Pukapuka according to informant, one cause of which is too frequent copulation. Five or six times in succession on the same day or night, informant explained, would be too frequent.

842 The theory of conception was discussed with Pau, a native medicine man. His theory is that the semen of the man congeals the blood in the uterus of the woman. This

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child, the parent, or one of the friends. The young men or women used their house as a lounging and sleeping house while continuing to eat their meals with their parents, to assist them in the general tasks of food getting. A parent who did not want his child to leave home would tell his child's friends to betake themselves elsewhere.

For the most part, young men and women stayed at home, lived with their parents, and assisted with the tasks of the family. A child who stayed at home was a *tama pili matua* (child close to parent). A favorite child (*tama wakacmaema, tama yele,* or *mayni*) was never permitted to live in a young men's house, especially if the parents, wishing to make a good marriage for the child, had gone to the trouble of graduating it from the house of seclusion. On the other hand, wayward children were not hindered if they wished to live with their friends. Residence in a young men's or young women's house was continued until marriage or until vagaries of personal choice sent the young person back to live with relatives. The present resident agent in the interests of morality does not allow unmarried young people to reside in young men's or women's houses, and this type of living arrangement has been officially discarded.

CULTURAL ATTITUDES TOWARD SEX

Once a Pukapukan boy or girl has attained adult status, he or she is at liberty to have sexual experience irrespective of marriage, which indeed usually comes much later in the life of the adult and only when he is ready to assume the specific economic responsibilities that marriage entails. It is a matter of no importance that a girl or a bride should be a virgin. There is no word in the language to characterize such a physiological state. Rather has a woman who has borne a child out of wedlock by this act proved herself able to bear her husband heirs to carry on his paternal descent line. A girl for whom parents wished a particularly good marriage found a certain but minor emphasis on the importance of preserving virginity, but this was more a matter of preventing her from attaining a reputation for being promiscuous than a matter of interest in her virginity. That the sacred maid (*mayakitanga*) of the chief was barred from sexual intercourse of any nature throughout her life was perhaps due to the religious functions she had to perform and was, at any rate, exceptional.

For the ordinary girl there is nothing in Pukapuka approaching the institutionalized rupturing of the hymen by an elder which occurs elsewhere in Polynesia, nor is there any institutionalized instruction of the adolescent in sex matters. Knowledge was obtained by the boy or girl through personal experimentation with members of the opposite sex. Informants remarked that a virgin who wishes to save her lover the trouble will digitally rupture her own hymen before going to him. But this is a matter of individual choice.

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833 girls and boys went together in the evening to the outer beach. There they played for a time and then paired off to copulate. That preferences and jealousies might sometimes wreck the happiness of these parties is well illustrated in case histories. The occurrence of periods of license after the chanting and dancing over the village sporting triumph is well authenticated from references in the chants. Married men and women and unmarried young people were all mixed together on these dance occasions. No tapus seem to have been observed save those for related kin. Intercourse on these occasions seems usually, but not always, to have been under the friendly cover of darkness, on any space near or on the dance ground. On certain other occasions, as at the end of the day when the canoes returned from a fishing competition, the women went to the beach to meet the men, and a period of wild lovemaking followed, all the more enjoyable because the men and women had been chaste for five or six days before and during the contest. It was customary during this license for women of one paternal lineage in the village to select lovers from among men of the other lineages in the same village.

833 177 At one time, if not throughout the history of Pukapuka, places were set aside where groups of people of both sexes would repair for sexual intercourse. The Pukapukan name for these places and for the group of people who sought enjoyment in them is *ati*. After contact between Pukapuka and Yayako, where these copulation groups were a highly developed institution, the Yayake name, *you*, was borrowed and superseded the Pukapukan name. Each *you* was presided over by an organizer and general guard (*taumatua*) after whom the group was named. The *taumatua* protected the members of the *you* against unwelcome interference by jilted lovers or irate husbands. Men and women went to the *you*, chanted and danced together, and had sexual intercourse. The place on Wale where the champion Waletiale once conducted his *you* (1) is still pointed out.

837 152 In view of the freedom of sex experience before and after marriage in Pukapukan culture, the question arises as to the incidence of jealousy in former times. From hints obtained from old stories, it is evident that jealousy was a frequent emotion of the spouse, but that the amount of jealousy stirred up depended almost entirely on the personalities involved. The classic expression of the culture pattern seems to be contained in the story of the visit of Te Palo to Pukapuka. When Pukapukan husbands discovered that Te Palo had been secretly visiting their wives, they were angry with him. But Te Palo reasoned with them: "There is nothing to it. My comings to your wives were comings only to scratch your women who are established so nicely in Pukapuka. Are you going to get angry for nothing?" The ideas which had angered the men subsided under this reasoning.

It would seem therefore that culturally there was no place for jealousy.

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837 586 If a married woman went from her house to sleep with another man and remained with him until daylight, she had committed adultery and belonged henceforth to her lover, for her act, called *puki uvuna*, was tantamount to divorce. If the woman returned to her husband's house before dawn, her behavior might also be considered adultery; but it was not generally condemned, even though her husband was at liberty to whip her. A woman might obtain her husband's permission to sleep with another man, and no punishment befell her as long as she returned home before daylight. Similarly, if before going off with another woman a man told his wife where he proposed to go, and if he returned before dawn, there was no cause for divorce on grounds of adultery. If the relatives of an erring young wife liked her husband and did not wish him to drive her from his house because of her infidelity, they intimidated her with thrashings until she returned permanently to him. He might be only too glad to have her return and so would not dare to punish her himself. There is no suggestion that payment or recompense was ever exacted by the injured party from the co-respondents in any adultery case. The group of stories (1) in which adultery is the motif illustrate the variety of individual and social reactions. 837 Today the attitude to adultery is confused through the operation of the Cook Islands' Act, under which the resident agent governs the island. 586 This act punishes adultery defined in terms of western concepts. Much of the present-day so-called adultery on Pukapuka is committed by day by married women with single young men. 177 Court punishment for the offense does not necessarily lead to divorce as long as the unfaithful spouse returns to her mate.

DIVORCE

586 Divorce (*maka*, to throw away) was easily procured in the native culture on grounds of incompatibility, specifically for adultery, cruelty, or personality conflict. A man might drive his wife from the house, or she might leave of her own accord and return to her relatives. The amount of provocation necessary for divorce depended entirely on the married couple concerned: where one might condone adultery in a spouse, another might consider this cause for divorce. Three married couples were separated during our stay on the atoll; two separations were due to alleged promiscuous behavior of the wife, the third was due to adultery on the part of the husband. Formerly, 586 separations were equivalent to divorce, but today they are only the first steps 177 in a tedious and (to the Pukapukan) expensive process leading to a legal divorce. One informant stated that Pukapuka is an island where women freely leave husbands (*e mennu maka tana*) and so initiate divorce. Close analysis of the records suggests that there is large measure of truth in this generalization.

586 Of 128 marriages of which there is record, 60 have been terminated by divorce or death: 18 of the 60 were ended by divorce; 42 by the death of one mate. Of the 18 marriages broken by divorce, 11 were childless; 7 were fecund. Though the presence of children is no bar to divorce, nevertheless it is established that the greater number of divorces occur among childless couples. Both of these conclusions are well grounded in the patterns of the society. With the extended family and the prevalence of adoption, it is an easy matter to take care of children rendered homeless by the divorce of the parents. With a premium on children to carry on the lineage, there is ground for divorce if the marriage is barren.

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not hereditary. Each practitioner started afresh. Induction into the ranks came through dream experience, believed to be given the man by the god of his lineage. The dream (*miti*) was either of a medical nature, or in some other way made plain that the dreamer was chosen by his god to cure sickness. In some modern dreams recounted in Pukapuka, the lineage gods as causative agents were succeeded by European doctors of medicine. An example of this is the following dream recounted by a native doctor:

> One night I had a dream in which I was taken to a *uale maki* (hospital). It was in Tahiti, I think, though my body was in Pukapuka. I saw two *tuunga*[1] *maki* (doctors) in the room. One man, who was t' chief, was standing beside a bed, the other man was leaning over someone lying on the bed. The one leaning over the bed straightened up as I came into the room, came close to me and said, "Come with me, e toku mouli (O pupil of my eye)." Then we three approached the bed. The chief doctor said to me, "I will show you how to treat sickness. I will show you all the parts of the body, so you will know what sickness is." Then the doctors showed me the two methods of *lomilomi* physical therapy. They cut open the body and pointed out to me the various organs, told me of the sickness affecting each part, how this sickness could be diagnosed, and how treated. These doctors were white men. After they showed me everything, they told me to go back to Pukapuka, but to dream of them any time I wanted assistance. I woke up in a normal condition, wondering why I should have been selected for this dream.

This informant had several dreams in which he has both procured status from, and asked information of, white doctors when called to treat sicknesses he could not understand. He did not use any technique to have these dreams. The old pattern was evident in the feeling of the initial dream that further contact with the source of inspiration could be obtained when meeting with unfamiliar types of sickness, though the medicine man of old consulted his lineage gods in every case of sickness brought to him, whether familiar or not.

For his services, the medicine man was paid whatever the patient thought fit. A small food gift was usually sufficient. He received ample recompense for his trouble in the social prestige that accrued to him as a prominent individual of the community.

CAUSATION AND TREATMENT

For treatment in former days, the sick person sent for or more frequently went to the house of the medicine man, who questioned the patient about the sickness, the location and nature of pain. After the first diagnosis the medicine man consulted the gods of the lineage or the special gods of medicine by whom the sickness might be cured. Communication with the gods was held in the house of the medicine man and in the presence of the patient, or in the god house of the medicine man if he were at the same time a practicing priest. The technique of communication was by the pigeon-

[1] The Pukapukan word *tuunga*, cognate of Maori *tohunga* (expert), is now applied to white medical specialists. It was formerly not used in reference to priests, seers, or medicine men but was an ordinary adjective denoting skilled, expert, applied to any other art or craft.

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In case of severe illness where neither treatment nor consultation with the gods seemed to help, the medicine man might recommend holding a general confessional over the sick person. He might also recommend in a case of difficult childbirth that the parturient mother confess. (See p. 273.) The object of the general confessional was to bring to light concealed sins among the patient's relatives, sins which might be retarding recovery, or for which the sick person might be suffering. The confessional survives today. We were present at one held over a sick child, an only son, aged ten months, in a family of girls:

> In the evening at about seven o'clock all the relatives, both close and distant, gathered in the small house of the parents. Outside were grouped all the people of the village, together with many people from the other two villages. Many brought mats with them, upon which they lay; others lay on the bare ground. All age groups were represented, as well as both sexes. The mother sat in the middle of the group inside the house, with the closer relatives grouped around her. She held the sick child on her lap, but did not participate in the "confession". Above her head a lamp burned, and by the lamp hung the old sennit malo that the child would receive should it live to maturity.
>
> The "confession", conducted by the principal males present, consisted in reiterated pleas and challenges directed by each man in turn to the other men and to the mother, urging them to confess what they had of evil in their hearts; suggesting that the child was sick because relatives had bad hearts (*ngakau kino*) and he could only get well when, and if, all the evil was confessed away from their hearts. No one actually confessed his sins aloud before the assembled community, but presumably each did so in the secret recesses of his heart. When one man stopped his urgings, another took up the plaint, and the arguments were bandied about the group without cessation. The crowd outside the house just listened, for the most part silently; some carried on conversations in low voices, and the inevitable flirting went on between the young men and women on the outskirts of the group. The "confession" was kept up all night, though the spectators drifted away at a late hour, leaving only the relatives to carry on.
>
> All was in vain, however. The baby died early the following morning; and the death was attributed in part to the fact that some among the relatives had not cleared their hearts as fully as was desirable.

PHYSICAL THERAPY

Though dependent upon the suggestions of the god for confirmation of diagnosis and ideas of treatment, the Pukapukan medical practitioner had, and still has, at his command a number of effective empirical techniques. My information is from Pau, today the foremost medicine man in Pukapuka. His treatments in general seem to follow native patterns, but he has probably borrowed (how much it is hard to tell) some of his rationalizations and practices from European knowledge. The practice of *lomilomi* (deep pressure) is the outstanding method of physical therapy:

> Pau's theory is that pressure on a vein (*uaua*) close to the seat of pain, in *lomilomi*, cuts off the blood vessels from the source of irritation, and thus prevents bad blood from flowing along the vein to the affected part. Formerly it was believed also to cut off the disease object from the seat of pain so that it could be removed.
>
> The two movements of *lomilomi* are: *yoka* (deep pressure) or *uaua* (gentle pressure), pressing with one finger on the affected vein; and *unkatele* (to travel), placing

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

805 Koa taupale te la: the sun is lower.
Koa to te la: the sun falls.
Koa ngoto te la: the sun sinks.
Koa mamalu te po: dusk.
Koa yeyengi te po: the night begins to darken.
Koa po te po: the night is dark.
Te pouli: complete darkness.
Te pouli kelekele: black night.
Te pouli mata newu: dark when stars are dim.
Koa vaelua te po: the night is divided into two.
Koa vave te po: the night is finishing.
Koa vave ki ao: dawn quickens.
Te ulu o te ata matua: darkness before dawn.

Where it is necessary to be more accurate in naming the time at sunrise, as in making arrangements for fishing parties to leave the villages, one of the following descriptive names is used:

Koa wenake te ulu ata matua: the first white shadows appear.
Koa wenake te ata kena: white shadows grow, the gray dawn.
Koa wenake te ata maoa: there is more light in the sky.
Koa kitea te kili o te tangata: it is light enough to see the color of a man's skin.
Koa wenake te ata kula: there is red light in the sky, red dawn.

For ordinary purposes, only general reference is made to one of the major divisions of the day: *te taeyao* (morning), *te tutonunga la* (midday), *te taupalenga la* (afternoon), *te auiawi* (evening or dusk), *te po* (night).

195 Four idiomatic expressions are commonly used to refer to ancient times or happenings of long ago. They are: *no te vaia o Mawu, no te vaia o Lotanga, no te vaia o Uikili, no te vaia o te taiweke.* The word *vaia* means "time" or "age". The last expression refers specifically to the time when the land was rising from below the sea, to the time of the "octopus of the sea", by transfer, to very ancient periods. The proper names in the remaining three expressions probably refer to early ancestors, perhaps to early and forgotten generation levels. No history is remembered about the names themselves, but the expressions are used in stories or conversation to give greater emphasis and vividness to narratives of olden times. Seasons and six-moon periods (*takalonga*) have been discussed (p. 24).

805 [177] Pukapukan informants today name 31 nights of the moon. As in western Polynesia, the names are descriptive, not proper names. Native custom elsewhere commonly names 29 or 30 nights, usually 30. It is possible that the Pukapukans have added an extra descriptive term to bring an old list of names into conformity with European practice. No names are remembered for the succession of moons throughout the year. Pau states that formerly the Pukapukans had names for 13 moons, but that these have been forgotten today. He suggested that some untranslatable words in old chants may

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

other players in the other circle. Leweke calls out, "Kaina, kaina na wale takataka o Leweke (Levi)" (Somebody has broken into the storehouses of Leweke or Levi). Then he rushes for the other players, who must run from their circle to his circle without being caught or tapped with the stick he is permitted to carry. He is allowed to whip with his stick any player he catches, because he has caught the "thief" who has been stealing his *takataka* nuts. Those caught must leave the game. Now standing in the second circle, Leweke repeats his call, and rushes for the remaining players, who try to run in safety to the opposite circle. This goes on until he has caught all the players. If a second game is to be played, another player is chosen to be Leweke. After this game, a group often goes on to play introduced games, common western games like "The fox and the hens", or "The cat and the chickens". The cat stands in front of and facing a line of players, hens and chicks. The cat asks, "Who is at the end of the line?" The hens answer, "Nobody." The cat says, "Shall I go see?" The hens say, "Certainly." Before the cat tries to pass the line of hens in order to attack the chickens at the end of the line, all dance together, and then the cat fights the hens who try to protect their chickens.

Tolotolounga, played by children from 8 to 10 years. Two equal teams are chosen. One team sits comfortably on the ground. The other team retires behind a house where it selects two of its members, one to act as a crier (*valovalo*), and the other to crawl (*totolo*) behind the *takapau* mat which the crier carries upright covering the crawler's feet and body. The pair thus approach the seated team. The crier calls out, "Tolotolounga, tolotolounga na ngalo, koai?" (Crawling, crawling, he has disappeared, who is it?). Now the members of the waiting team are collectively given one guess as to the name of the hidden crawler. If they guess correctly, the crawler's team is *mate* (dead). If they guess incorrectly, the crawler's team scores a win and then comes out again. Not until the crawler's team dies, does the sitting team get its turn.

Poi, another guessing game. Two or more teams sit outside. A player (A) from one team stands up and looks in front of him. A player (B) from the other team comes up behind him, and facing the same way as A, places his hands over A's eyes, and then lightly and quickly touches the back of one of A's legs. A has to guess which of his legs has been touched. If he guesses correctly then the two teams change places. If not, then the first team continues to guess.

Dances and Songs

The locus for the children's dancing and singing is usually the beach. Children dance any time during the day or evening, just as the spirit moves them, in groups consisting of boys alone, or mixed groups. Much of this imitates adult activities; whenever adults are practicing dances, groups of children gather on the beach to perform to the best of their ability the same dances.

The dancing is of the modern Tahitian style, with all the dancers in line performing the same rapid movements of arms, legs, and hips to the rhythm of modern Tahitian, Samoan, or Lower Cook Islands songs. The individualized Samoan type of dancing is absent. Some songs (*anu*, modern) seem to be improvised as the occasion demands, and the children are expert at fitting melody and words together. The words of many children's songs were recorded; most of them, however, are not translatable because they consist mainly of nonsense jingles which fit in with a particular melody. A few translations which it has been possible to make are given to suggest the

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

526 removed (*to*). Should he have two or more discs on the mat, none of which is bettered by the opponent's discs, these are left until such time as the opponent manages to place a disc ahead of them, when all behind opponent's placement are removed.

The players in turn shoot their discs always trying to line their own discs on the edge of the mat, while keeping the opponent's off. Two skillful players will often play through their discs, each putting his shot well on the edge of the mat, only to be knocked off by the next play of the opponent. In this case there will be only one score (*kai*), the last disc thrown by the second player. To knock two of opponent's discs off the mat with one throw is *tita lua*; to knock off three is *tita tolu*. Should there be several discs on the mat at the end of play, only one player's disc or discs bettering all discs of the opponent is counted in the score. Should it happen that the player who started has no disc remaining on the mat and only one disc left to throw, while the finisher has two discs left to throw and at least one on the mat, then the latter, without taking his turn, calls out, "Na lave", and scores three points. The beginning player forfeits his last shot, and the next round begins.

With the help of the *kauyalo*, the players remember their own scores for each round; the player who first scores ten points wins (*to te ulu*).

A game of *tupe*, though played at one time by only two players, is actually of the nature of a group game. At the end of a game, the loser briskly jumps up and another person takes his place to try his skill against the winner. The number of persons that one player successively defeats is his *iki;* two, *iki lua;* three, *iki tolu*. The crowd sits or stands about watching with the greatest interest and coaching each shot. Should the *kauyalo* neglect to remove a dead *tupe*, someone in the crowd of onlookers is sure to scold him and order him to remove the disc, "To te tama ia! E kole, te tupe i te tautawa na!" (Remove that child! No, the one on the side!) The player must decide whether to attempt to knock off the opponent's well-placed disc, with the danger of losing his own disc over the edge of the mat, or whether to leave the opponent's disc in position and attempt to place his own disc ahead of the other. Similarly the skillful player has a feeling for the relative merits of each of the discs; a heavy disc he will save for a crucial shot when it is important to knock the opponent off the mat, a light disc he uses for a placement shot at the beginning. The game is played for hours on end by successive players, the player who scores most victories at a session being adjudged the winner. A favorite time to play is in the cool of a moonlight night, when a full moon gives ample light to judge the discs.

524 There are no records of indoor or outdoor guessing games other than the children's games of *tolotolonga* and *poi* nor do the Pukapukans seem to have indulged in riddling contests.

INTER-VILLAGE CONTESTS

526 [177] Outdoor sports competitions between the villages were very common. Of the large variety of such games, many have been submerged at the present time by a passion for cricket, which is played between village teams of men and women with any number of players on each side for two or three weeks at a time. Old-time games have not been forgotten, however, and our presence on the island was the incentive for their revival.

Coconut-tree climbing contests (*tauinga'aga kaka niu*). Two coconut trees are selected near an open space. The height of the nuts on one tree is measured with a rope; the same height is measured off on the other tree and marked on the bole by a fastening of coconut leaf. In contests where the two trees are of about the same height the winner is the one whose nut hits the ground first. Where the trees are of unequal

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

overboard and drowned. The survivors set out to explore the reserve and ate *pulaka* tubers from the gardens. They were found a day or two later by men from Yato who went to the reserve to catch birds. The strangers were taken to Wale, well cared for and given to the several lineages to be looked after. Tata, Tualangi, and Pailoa were adopted by i Tua; hence the two men were assisting Alatakupu on the visit to the reserve. Telua was given to Yamaunga, and Tokoua to Muliwutu. The unmarried man and women soon found Pukapukan mates. The two men were killed in the fight on Ko, but Telua and Tokoua had children, and their descendants are mixed with the present Pukapukan population. (Note that the strangers had to be adopted by the paternal lineages before they could have status in Pukapukan society.)

That this drift voyage from Manihiki to Pukapuka was not exceptional is shown from a report of Gill (12,p.29) who landed on Nassau in 1862 and found there remains of a settlement of people from Manihiki, six men and one woman, who had set out in 1859 or 1860 to sail to Rakahanga and had drifted to Nassau. The castaways lived on Nassau for two years before being returned to Manihiki by a passing vessel.

First White Contact

It was during the time of Alatakupu that the first white man's ship (*payi*, a European boat with two masts) came to Pukapuka:

The men of Pukapuka, organized on the *matakaavu* basis (p. 374), went out in canoes to meet the boat. The *yiliyili* coconut midrib was thrown at the strange vessel, and because it was not returned, this was taken as a sign of peace. Two men of the advance canoes scrambled up the high sides of the boat and onto the deck. These two were Tawaki, a warrior of Yalongo and Kaleva-motu, warrior of Yangalipule. Other canoes came up with mats and coconuts which were passed up to the boat to be exchanged for the white man's goods. The two reserve canoes likewise came up, and a brisk bartering was soon in progress.

Profiting by the confusion on the deck, Tawaki cut away pieces of rope from the rigging and threw these into the canoe. Then he picked up wire, iron, nails, anything in fact that he could lay his hands on, and threw them overboard. Becoming more daring still, he walked up to the captain, who was smoking a pipe, and took the pipe from his mouth to inspect the strange object. The captain resented this freedom. He went below and came up with a gun (called by the Pukapukans *ngaau/iuvi* because it resembles a detumescent penis). Tawaki had gone to the bow and was busily cutting off a piece of rope when the captain saw him again. He pointed his gun at Tawaki, but Tawaki did not stop. Then the captain fired and Tawaki dropped dead. The crew produced guns and drove the Pukapukans over the side. The body of Tawaki was lowered into a canoe, and the fleet sheered off from the strange vessel, which hoisted sail and slowly drew away from the island. The body of Tawaki was brought ashore amidst much weeping and buried in his own cemetery. The iron and ropes were divided among all the men of the island.

The Regency

Tuiva's regency was in general a peaceful period. He realized that much of the trouble in the time of Alatakupu was due to the fact that the old men had found time hanging heavily on their hands and invented mischief to make life more interesting. Tuiva therefore refused to admit to the old men's age grade any person who was not "crawling with age".

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukan

Tuiva informed the whole island, "Listen you to me, O the island. Kilika shall have charge of the back of the island, while I stay in the central island and the point of the island to protect it, so that no bad ideas grow." The people were to increase; the number of the men reached in the time of Tuiva to a thousand and one hundred. He also made as his old men's group, men crawling with age; they were old men. Thus it has come down to the time of light now; no other fight has arisen.

Obviously Tuiva was a hot-headed man, led astray by his excessive feelings for his children. Where their welfare was concerned he had no mercy on his brother. He was undoubtedly at fault in violating the tapu of the sacred enclosure, where Takitini had taken refuge, and Watumoana was quick to take the excuse to alarm men from Yato in an attempt to wipe out Tuiva and his supporters, and incidentally to secure the women of the island for themselves—a characteristic Pukapukan touch. However, kinship ties cut across ties based on village groupings. Tuiva was informed in advance of the plot against him and managed, with the aid of his supporters, to defeat and kill the Yato men. Those not killed in the fight committed suicide by having their relatives bury them alive, a not infrequently mentioned method of self-destruction.

Further White Contact

No further incidents are remembered of the regency of Tuiva. With the accession of Ikilua, the main chiefly line was resumed once more, coming down to the present day. Two voyages from Pukapuka to Samoa were made. Two further visits of European ships immediately before the coming of the missionaries are remembered. One was the visit of the Peruvian slave raiders about 1862 or 1863. The other was the visit of a white man's ship about 1850. It was named by the Pukapukans Te Vaka-o-lalangi.

When the ship was sighted, the canoes approached it, and after the coconut midrib *ulilili* was kept by those aboard the vessel, the people went aboard to exchange goods. Each lineage tried to get as many European goods as possible in order to increase its prestige. Among the things obtained from this boat were ropes and iron objects, clothes (first called *hili langi* or *la kupenga*), and black tobacco leaf which they named *tutao* because it resembled the blackened oven covers removed from the native oven after the food is cooked.

One man, Kautoki of Muliwutu, saw an animal which he thought was a large rat, but which was a dog belonging to the captain of the vessel. Profiting by a diversion of interest and finding the dog opposite a swinging scupper, Kautoki pushed it through the scupper; it fell into his canoe moored beneath. The people in the canoe hid it under some mats. Kautoki jumped into the canoe and it sheered away. The captain missed his dog and, thinking it was in one of the canoes, picked up a gun and fired at them. At this all the people tumbled into their canoes and pushed away from the boat. One man, Yalewalu, was left on the boat. He jumped overboard but was hit by shot and wounded. He swam to a canoe and was hauled in. All the canoes began to paddle frantically to the reef, but still the boat's crew continued to fire on them. The canoe crews prayed to their gods to protect them, but one man, Malo by name, was killed by a shot, for he had broken a tapu and was therefore not protected by his god as were the others. The shots splaying up the water were likened by the people to shoals of

Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

fish scattering through the sea. When Malo was killed, a paddle was flashed in his canoe as a sign to the people crowded on the beach that misfortune had overtaken the canoes. The people then came out to the reef, and when the canoes had maneuvered through the landing channel, death chants were started and the body carried ashore.

The dog was looked on as a strange animal and created much interest. It was called *kiole* (rat) or *tupua* (animal) and became a sort of prestige symbol for Muliwutu lineage. It was taken to the principal god house and sacred enclosure of the lineage, given the best food that the island produced, and ornamented with leaves and flowers. The people of the lineage were never tired of boasting of their prowess and bravery in stealing this animal from the white man's boat. The dog was honored thus until it died of old age. Other lineages later tried to get strange objects as prestige symbols, but none were so sensationally successful as this Muliwutu "rat".

VOYAGING

The following summary accounts of canoe voyages away from Pukapuka are given for the light they throw on Pukapukan social customs and on early contact with other islands of the Pacific. It is inevitable perhaps that many of the places and islands named in these accounts can not be positively identified. Some of the lands visited, such as Witi (Fiji), Tonga, Niue, Yamoa (Samoa), Niutao, the Tokelau Islands, probably are the islands that have these names today, but other islands, such as Yayake, Yiva, Yake, must remain covered with the mists of obscurity. The accounts of these voyages establish the fact that the Pukapukans in the heyday of their navigation must have been as fearless sea rovers as their Polynesian cousins of other islands. The knowledge of astronomy that remains today shows that some of the remembered star courses were exceedingly accurate, and, given courage and reasonable good luck, there was every likelihood that Pukapukan sailors could and did reach distant islands.

The reasons for undertaking these sea voyages were: a desire for adventure, desire to visit the lands and peoples that traditions told them lay below the horizon in all directions; desire to bring back to Pukapuka useful stones that could better be used for implements than the soft coral rocks and shells of the native environment; desire to advance the prestige of one paternal lineage as against the others. Further, some voyages were made through necessity: through shame at some unpleasant experience, or through the virtual exile that awaited any Pukapukan man whose powers, whether physical or supernormal, made it seem to the populace that he might someday be led to use these powers to advance his own private, selfish, and antisocial interests against the interests of the group as a whole.

I think there is no reason to discredit the validity of these voyages simply because incidents that smack to us of the supernormal or the impossible, have crept into the accounts. Doubtless returning voyagers made the most of their exploits, and tall stories have found credence with the stay-at-homes in every age. But such stories are always woven into the context of actual fact. It is probably impossible today to separate imaginary adventures from

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

has difficulty in obtaining a woman's favor: "Wano koe ki Nuku-namutole" (Go you to Nuku-namutole). Children at play sometimes fashion little make-believe canoes of coconut leaflets which they call *voko o Welei* (canoes of Welei). The legend of a far-away island inhabited only by women recalls a similar legend reported from both Sikaiana and San Cristoval.

The voyage of Yawau indicates the intense power of the weapon of ridicule in a small community and the manner in which its unsparing use can drive a man to the most desperate straits. Yawau was a priest of Yamaunga lineage. As the result of a fishing contest, the lineage was able to present Yawau with a large portion of *Ruvettus* fish. Yawau ate heartily of this fish, but later when chanting to his god in the god house, the people noticed that he had defecated on the priest's seat. Yawau became ashamed of his mishap, especially as the children were wont to tease him about it. He fitted out a canoe and sailed away, seeking for a land where the people had not heard of his shame. But the people of Tokelau, of Samoa, of Fiji, and of many other islands welcomed him with ridicule and it was only after reaching the land called Kapiti-te-wue that Yawau was able to find a haven where he could settle down and live forever.

The journey of Wue, eighth chief of Pukapuka, made to the islands to the east and west of Pukapuka resulted in the introduction of many games with which the Pukapukans were not previously familiar. The account is a long one, telling of the adventures of Wue, his two sons, and his crew of Loto men at each of the islands visited.

By asserting that anything new he saw was a child's trick of no consequence in Pukapuka, Wue was able to steal swings from the people of Lakawanga, jackstone shells, the idea of coconut juggling, and kicking games from other islands, *tupe* discs from Wakalava. At only one island was Wue unsuccessful. At Motulau, the people played with a red feather which, when placed in the mouth turned the whole body a deep red color; when the feather was removed, the body turned brown again. In spite of all Wue's assumed indifference, people of Motulau valued the red feather too highly to allow him to take it and Wue could bring back to Pukapuka only a memory of the tantalising feather. The remarks of Wue, the counter-remarks of the people of the islands he visited (all repeated the customary three times) and the tricks whereby Wue secured the things that interested him, are all considered highly amusing. The saying *Te Ngutu o Wue* (the mouth of Wue) is today applied to any one who exaggerates greatly or who obtains something from another by lies, beggary, simulation, or trickery.

The next voyages were those of Te Nana and Yi to Tonga, Niue, and Yayake. Informants thought they occurred in the reign of the chief Maina. But as this was after the seismic wave had more than decimated the population, it seems unlikely that there would have been enough energy left for long voyages of adventure and exploration. It is probable that these voyages belong to the era of Wue, being made perhaps after this explorer had returned to Pukapuka from one of his trips with his accounts of lands to the east and to the west.

Te Nana and Yi had each an outrigger canoe. Beyond the names mentioned in the narrative, other members of the crews are not remembered today. After leaving Pukapuka, the first landfall of the canoes was Te Motu-tuwua and Te Papakaleva. They fished in the lagoon in the middle of Te Motu-tuwua as all the other voyagers had done. They ate fish until they were satiated, which was soon, because they had no complement of taro. Then Te Vae-matua, one of Te Nana's crew, thought of the plan

of copra are exported. Nine varieties of taro (*Colocasia esculenta*) grow on the island; *talo Borabora, talo maoraora, talo koli, talo uakene, talo nenengu, talo kula, talo pongi, talo taraki, talo 'enga'enga.* *Puraka* (*Cyrtosperma chamissonis*), a coarse tuber of the taro family with enormous heart-shaped leaves, is grown in the wet pits. This plant is said to have been introduced from the Cook Islands. Bananas (*wuti*), papayas, limes, and sugar cane grow on the island, but because of the poor soil the production is slight and contributes very little to the food supply. Hutchin (6, p. 173) states that sweet potatoes (*kumala*) and arrowroot were formerly grown.

Fish forms the chief flesh diet. Turtles are caught during the mating season when they are off the reefs and the females come ashore to lay their eggs in the sand. Pigs and chickens are kept on the island but are eaten only on occasions of celebrating some event.

Although Pukapuka was sighted by a European ship as early as 1765, it has enjoyed an existence remarkably free from intercourse with Europeans because of its isolation and its lack of natural resources. Captain Byron discovered the island on June 21, 1765, and named it "Danger Island" because of its treacherous submerged reefs and rapid currents. Lovett (8, p. 372) states that a native missionary teacher was on the island in 1857 and had proselytized most of the natives before the arrival of Reverend W. W. Gill, the first European missionary, in 1862. During the decade 1860-70 Peruvian slavers raided the island for laborers to carry to South America. In two visits they took 150 men and women, none of whom ever returned to their home (11).

The island was formally annexed by Great Britain in 1892. In 1901, by an Imperial Order in Council, Great Britain extended the boundaries of New Zealand to include the Cook Islands, Tongareva, Manihiki, Rakahanga, Palmerston, Pukapuka, and Niue. Pukapuka is now governed by the Cook Islands Administration. At present Mr. Geoffrey Henry, Resident Agent, directs the government, and with Mrs. Henry conducts the island school and cares for the health and sanitation. Most of the population belongs to the London Missionary Society Protestant church, which is under the direction of a native pastor. In 1919 Mr. Wicks, of the Seventh Day Adventist sect, arrived at the island and directed the building of a church during his temporary residence. A small group still retain their membership in this church. No European missionaries live on the island today.

on the ground. The arrangement of slabs was demonstrated by a native (fig. 2). Two erect slabs formed the back, two horizontal slabs the seat, and slabs at each side the arms. The position of other slabs lying scattered on the ground suggests that they once stood on edge and formed a low enclosure.

These "seats" were built by the Eaki people who came to Pukapuka after the first settlement. In the legend of Manava Nui they were the places from which he watched for fish and turtles. The inference is that the Eaki used these structures as maraes for offering turtle and fish to the gods; their priests may have used the erect slabs as backrests, as was customary in the Tuamotus (2).

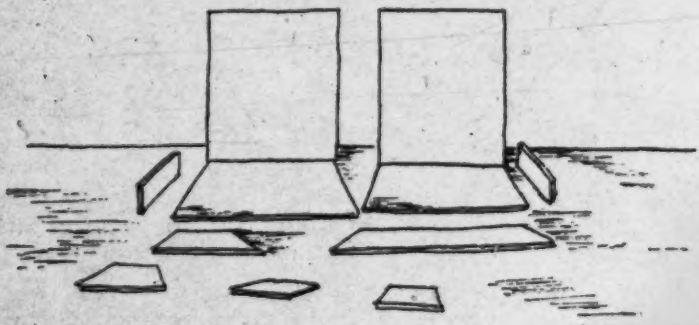

FIGURE 2.—Eastern stone "seat" of Manava Nui, sketch made from a miniature seat constructed by a native Pukapukan.

GRAVES AND BURIALS

The dead were formerly buried in the marae (*aoanga*) of the village. Due to a government order the maraes have been abandoned and houses have been built over them. It was difficult therefore to determine their number or boundaries or to learn their exact purpose in the former life. Some contained graves; others had graves near them. The burial ground of the *ariki* is still preserved. It is now used as a modern cemetery and contains graves of both pre-Christian and Christian times (pl. 1). The coral slabs that once marked the graves of an ancient cemetery at the western end of Aonga on Motu Kotava Islet were washed into the sea by the tidal wave of 1914.

On the southeastern shore of Motu Koe Islet are the graves of two Pukapuka warriors, Tuanua and Titake. Both these graves were dug in pre-European times. That of Tuanua remains intact and is

2:Macgregor E-2 (1933) 1935 Pukapukans

and the midrib is pushed through the hole before the needle is withdrawn. As shown by Buck (12) the same technique is used in the Cook Islands. 000

Most dwelling houses are built on a double platform of coral rubble, the lower platform several feet larger than the floor of the house. The upper platform, which forms the floor of the house, is made on the first platform and extends about 1 foot outside the walls of the house. Each platform is retained by logs or a curbing of coral slabs 8 or 10 inches high.

ADZES

For cutting out canoes and shaping timbers, the Pukapukans, like the dwellers on other Polynesian atolls, made adzes from the *Tridacna* shell—the only local material available. 321 412

In the adz shown in figure 13, *a*, the poll is pointed and the side curves to the rounded cutting edges. The striated outer surface of the shell has been left on the convex front and only the bevel ground smooth. The concave inner surface forms the back which has the grinding surface to sharpen the cutting edge.

Another shell adz (fig. 13, *b*) is roughly rectangular in shape. The front is the outer stratified surface of the shell, except at the bevel which is ground on this surface; the back is the concave inner nacreous surface of the shell; the cutting edge is slightly convex. Part of the concavity and thickness of the shell have been removed by grinding down the outer rim until only a slight depression is left in the center. Along the slightly concave cutting edge and the two sides the surface is smooth and flat. The poll is broad and irregular and has a rough broken surface.

An adz found in Pukapuka (but obviously an importation) is made of basalt and is of the type common to western Polynesia (fig. 14). It is a long, thin, flat, quadrangular, tangless adz that tapers from the cutting edge to the poll. The front surface is slightly convex and is narrower than the back. The front, also the bevel of the back, are ground smooth. The remainder of the back and the two sides have rough chipped surfaces. The edge of the blade is straight; the bevel is convex longitudinally. Due to the rough, unground surface of the back, the chin is irregular. 177 ● 412

2:Macgregor E-2 (1933) 1935 Pukapukans

finished at the edge of the basket and is seamless. The end elements of the finishing edge are turned over and worked into the plaiting over the opposite elements. The basket has two handles made of braided strips of hala which are sewed to the sides.

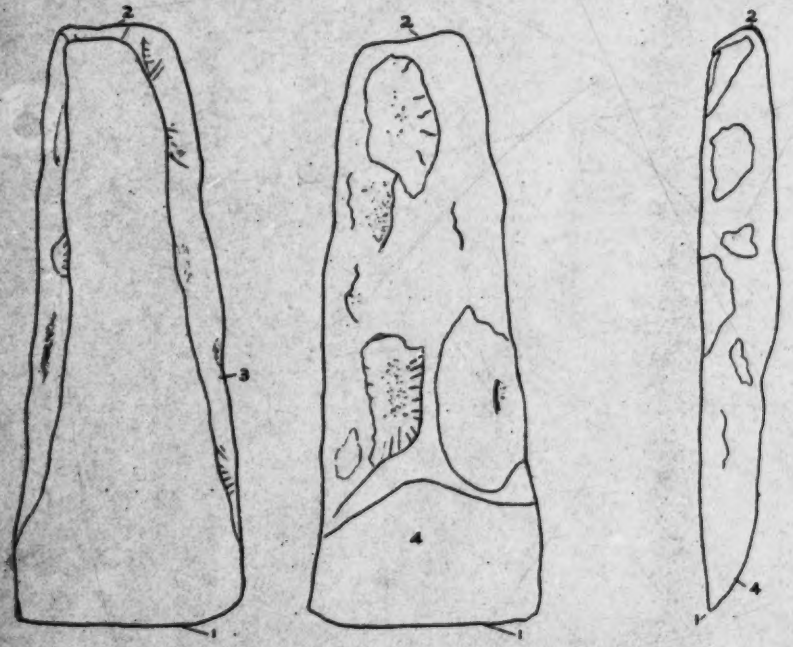

FIGURE 14.—Quadrilateral adz of basalt (no. B 8809, Bernice P. Bishop Museum), front, back, and side views: 1, cutting edge; 2, poll; 3, oblique side; 4, bevel; greatest length 7.5 inches.

Food is mixed in wooden bowls (*kumete*) (fig. 15). They are hewn from single pieces of wood and shaped into elliptical bowls with flat bottoms. Short handles are cut at either end.

FIGURE 15.—Elliptical wooden food bowl with end lug handles and flat bottom.

2:Macgregor E-2 (1933) 1935 Pukapukans

The dances seen during an evening's entertainment were performed by a small number of people in Loto village:

Men and women danced together in four lines, the men performing one set of movements in unison, the women performing another set. In one dance the men brought their knees up high in a stationary run or kicked their heels behind them, while the women moved their hips rapidly from side to side, keeping the upper part of their bodies motionless. The gestures and steps of this dance and several others recorded in motion pictures are identical with rapidly performed dances of Tahiti. Each dance was led by one man, who made gestures and remarks amusing to the natives.

The accompaniment was kept with an improvised drum made of a roll of mats. The rhythm was first given, and after a long roll of the drumsticks the dance commenced. Throughout the dances, the dancers sang songs which they called *'imine*, a Tahitian word derived from the English "hymn."

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533 has provided a socially approved outlet for feelings of aggres-
154 sion and hatred. The glorification of the individual which is
578 implicit in the controlling patterns of Pukapukan society is evident also in the love chants and these too, have provided socially approved channels for the expression of sentiments of love and affection that might otherwise not find outlet in the somewhat matter of fact behavior which characterizes the relations between the sexes. It is no exaggeration to say that an ability to understand and feel all that is implied in the chants is the best possible way of gaining an appreciation of native Pukapukan culture. They literally provide a source book to the ideals and practices of this culture.

533 After each of the fishing competitions held during our visit, and during the sports competitions held at the New Year, each village composed and sang special chants celebrating its victories. In the fishing competitions for instance, on the night before the big public feast marking the conclusion of the fishing, men, women, and children of the winning village gathered together on the village meeting ground just after dusk and practiced throughout the night until dawn old and new chants in preparation for the public chanting on the last day. Again during the visit of the villages to the reserves to prepare copra, one or more nights each week was devoted by the adults of Ngake village to the learning of new chants and the practicing of old ones. These chant practices were alter-
181 nated with nights of Christian hymn singing. The contrast provided between the sentiments of the more popular Christian hymns and the vigorous paganism of old chants symbolizes in striking fashion the apposition of ideals that characterizes Pukapukan society today.

Dancing

535 Two types of dancing, one old, the other new, are in vogue
527 in Pukapuka today. The modern type known by the Rarotongan
177 name upaupa, is said to be derived from Tahiti and is performed by children on all occasions and by adults at Christmas time. On Christmas day, the men (or women, in alternate years) of each village form dancing teams which visit in turn each of the other two villages, where they are entertained by the women (or men) of the village for whom they dance on the village meeting place. The dancers are grouped in four lines facing a leader who sets rhythm and movements. As the dancing proceeds women join the group and dance opposite the men, files of women alternating with files of men. After dancing, the visitors are given a feast, and then move to the next village to repeat

522 Humor.

Loite, the matakivikivi, crosspatch of Motu Ko, had just returned from Wale this during the stay of the Ngake villagers in their rich islet. In characteristic fashion, enhancing the merits of her village motu, at the cost of the other two villages, reported that Wale, as usual, was awful; nothing to eat there. "Ko pupu wua 1 latou lemu." "Their anuses merely flatulate." She accompanied the remark with the proper noise from her mouth. The point being, of course, that the other people had no food to eat and consequently could pass no feces. She laughed heartily at her joke.

597 Adoption.
593
159 Mata and Leleau's adopted child, Lima, came back from school, took off his shorts and started down the road in the direction of Loto village. Mata screamed after him, and, seeing that he wasn't coming back, she ran after him, and after a while came back. Lima, who had been whipped, came running along in front of her crying hard. He went right into the house and she shut two doors on him.

I asked her what Lima had done, and she answered that after having been gone all morning, and coming home late from school to boot, here he was going to leave them (maka: throw them away), her and Leleau, and go off to his parents in Loto. He never stayed home with his adopted parents; this was her grievance. In point of fact, when the child came back from school, Mata paid no attention to him, Leleau was away.

A similar sentiment was expressed shortly afterward by another woman, Matala, the adopted mother of Vaimau. While we were talking, the little boy appeared. She asked him where he'd been. He said to the mate (house of death) in the next village. She then asked him why he had maka's thrown over, left Akalili, his adopted father, like that. (Akalili was nowhere in sight.) It seems from these examples that foster parents exert every effort to keep their adopted children from visiting their real parents too much, to keep these children for themselves.

524 Introduced toys and games.
177 Marbles, pei, are made from wetau wood, and are about 20 mms. in diameter. A square or oblong is marked out on the ground, Kokoti te ala, and the stake marbles, tuku, are placed in the ala. Tuku te pei ki lunga ko te ala. From the distance of a fathom or more, the contestants throw their tore [?] marbles, tamou, towards the ala. Throw or shoot the marble is pata. The man whose tamou is nearer the ala shoots

524 first at the tuku in the ala. If he hits both tuku, he may try
177 for his opponents' tamou and if he hits this also, then he wins this. If he misses the first time, then his opponent shoots with his tamou.

The toy bow and arrow is used as children's sport today. The bow is made with tua niu bound together with continuous thread of lauwala. The bow string is uka. The arrows, ti, are tua niu. The bow is wena. A heap of puapua seeds is put in the center of the ring. Children sit in a circle and fire arrows at the seeds. Each seed impaled by the arrow counts one point to the child who shot the arrow. No game was played during our visit, but was described thus by informants.

181 Miscellaneous.

888 For the man, it is important to marry and have children, that the paternal descent line may be continued. For himself and the next generation, a man likes to have a house, one or more canoes. He may sow sexual wild oats in abundance in his youth, and this applies also to the women. But in old age, the ideal is to live to a ripe old age, and then to retire from active work, to be surrounded by a crowd of children and grandchildren, and to spend one's days in active talk with one's contemporaries, directing the activities of the lopa group.

539 [See 3: Beaglehole and Beaglehole, p. 65--analyst.] As the men advance with the canoe cortege outside the reef, mako and wave the paddles, the following mako is the one that is sung:

E lapaki te woe alua ma no
Kateli ka kina yai yo yio
Ke te ta ko yio yio
Ke tangi te titi oyio yio
Ke tangi te lawa oyio yio
Koa lelei ka koa lelei ka
Taku pupune ia.....

621 [See 1: Beaglehole and Beaglehole, p. 221--analyst] In the case
591 of matrilocal residence of the male, or even in the case of customary patrilocal residence, the man may wish to tau [affiliate] in the village of his wife. In the former case, residence takes care of itself, but in the latter case, he will continue to live patrilocally, but join his adopted village for play, copra making, food divisions, etc.

244 Today there is a tendency for the people to pull and eat the talo before the plant is fully mature and ready to eat, often

793 If the priest has been wholly attentive to his duties, and has
834 been continent the night before the favor is asked, then the
226 gods turn a favorable answer and fishing is successful.

227 [See 1: Beaglehole and Beaglehole, p. 58--analyst.] A
286 kaloma net, e.g., a net used for small beach fish, is made of uka, 10-12 fathoms long, and 6-9 feet deep. It might require 2-3 years to make. The mesh is very small. Vai pule shells were attached to the bottom of the net to serve as weights, and sections of pukama wood were attached at the top to serve as floats. Hauling ropes of kawa tau were served with uka, and attached to the ends of the net.

854 The Pukapukan infant is fed when he is hungry. He plays
855 when he has energy. He sleeps when he is tired. He does
863 any or all these things at any time of the day or night, almost any time, because he mercifully does tend to sleep for most of the night, provided he is young enough, and when he is older, what matters it if he does or not? He can look after himself by this time and so not trouble his elders. The Pukapukan child has no feeding difficulties. If he is not hungry, he does not eat. The oler child takes his food share: away, and either stores it up for a hungry hour or else shares it with another. Nor has the child any excretory difficulties. He is not badly scolded if he dirties his mat; the mat is easily cleaned and so is he by being dropped into the sea. And soon, since no one pays much attention to his excreta, and excretion is considered as natural in this society as eating, he soon learns to go to the sea himself whenever he has need to.

764 [See 1: Beaglehole and Beaglehole, p. 162--analyst.] (From Pau--doubt as to accuracy) Gravestones for children: small stones of any material about 8-9 inches high. Young boy, not wakatane: the stone is placed in the ground with its long side upright. Young girl, not w'wawine: the stone is placed in the ground with its long side on the ground. Children will be buried close together, with the head and feet stones touching those of the next grave. There is no feeling about keeping apart in death wale atua even if they should happen to belong to the same po. Stones for children will be unshaped punga.

285 Note that the making of baskets with handles was not an old
177 Pukapukan custom, but has been introduced, most likely from Raratonga. Even today these baskets have not any other use save as Bible carriers on Sunday. Their place in Pukapuka was

285 filled by the open ola and the tuluma of lau wal pakapaka.
177

225 [See 1: Beaglehole and Beaglehole, p. 69--analyst.] When the turtles are seen joined together in copulation, men swim out and surround the turtles. One man dives down underneath the turtle, and comes up to grasp the foreflippers, kapakapa. He pushes the head up, the rear parts are depressed, the man puts his legs around the turtle's body and holds it. His companions come up, stretch the foreflippers apart and tie them to a stick. The turtle is then lifted into the canoe and brought ashore.

526 Te Awuawu and Ngaliyeyeu were the originators of the game
776 Lukipoko, and through their teaching it to Wotoa and his friend, the game was introduced into Pukapuka.

776 [See 1: Beaglehole and Beaglehole, p. 308--analyst.] Atua punupunu [principal gods of the paternal lineages]: When asked the meaning of the word punupunu, informants say, "round". When reminded that the Pukapukan word for round is pukupuku and that punupunu is the Rarotongan word, then informants hedge and say the classification must be atua pukupuku. When asked to explain the meaning of such a classification, they say they do not know, whether it might have referred to a round stone that represented the god or whether to something else, informants simply do not know.

782 When the aliki [chief] or the wola [executive] go to pray to [the goddess] Taua, each takes with him lau niu or lau wuti which he ties round watu Taua. "This is to make the stone look pretty, glad, and happy so that it will listen receptively to the prayers of the men." No food offerings were ever given to Taua, only the wrapping of leaves.

539 Native texts.

The Revenge (Literally the Oven) of Two Girls. [For English translation see 1: Beaglehole and Beaglehole, pp. 379-380, category 116 or 539--analyst.]

Ko te Imu o Lua Tamawine. No Tonga laua. Eia lua o laua kainga: ko Manawune ma Tangaloa. Wo loa lua tamawine ia ki Yayake. Wekake loa lunga o Na Tua Wuewue. Ta mako loa laua. Wakalongolongo loa te wenua ia i te leleka o laua leo. Wo loa la te wenua ia ki a Tuyimate. Ikiiki mai loa ki te

11: Hutchin M-2 (1904) 1904 Pukapukans

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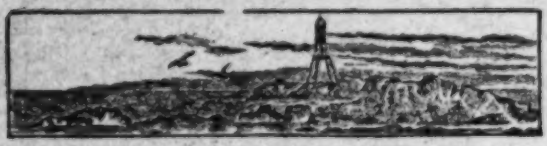

TRADITIONS AND SOME WORDS
OF THE LANGUAGE OF DANGER OR PUKAPUKA ISLAND.

By the Rev. J. J. K. Hutchin.

IN the month of May, 1904, accompanied by Lieut-Col. Gudgeon, C.M.G., I paid a visit to Danger Island, recently annexed to the Colony of New Zealand. It is a solitary atoll more than seven hundred miles to the north-west of Rarotonga, with a population of nearly five hundred people. Only one vessel has visited the Island since the visit of the s.s. "John Williams" in October, 1903. Owing perhaps to their want of communication with the outside world the majority of the people seem somewhat duller in intellect than the other Northern Islanders. One of the most intelligent of the natives is a man named Ura, and during our short stay there I gleaned the following information from him.

"Bukabuka was a rock in the ocean. A god named Tamaye watched the rock, and thought it to be of no use whatever. The rock, however, burst asunder, and a man appeared. He looked about him, and there was hardly standing room. He accordingly made the land of Bukabuka, and he was the ancestor of the people. His name was Uyo. His wife came from Tonga, and her name was Te Vao-pupu. Their son was named Tu-muri-vaka, and their daughter was named Te Mata-kiate.

In very ancient times two warriors came from Tonga, one was named Tokai-pore, and the other Taupo-roa, and they settled the people in three districts, one was called Avarua or Kotiporo, another Te Awoa (*v* pronounced like *w*) or Pana-uri, and the third Taka-numi or Ure-kava. In those days the *kumara*, the sugar cane, and arrow-root grew on this Island. (The *kumara* plant flourishes now but has no tubers; the sugar cane grows when planted in the *taro* patches, but there is no arrowroot there at the present time).

They went to many lands in ancient times. Their warriors went to the east and west, but not to the north or south. The people went from Bukabuka (its ancient name was Nukuroa) to Samoa, to Niua,